

**U.S. Department of the Interior
Bureau of Land Management**

**Preliminary Environmental Assessment
DOI-BLM-UT-C010-2012-0018-EA**

**FRISCO WILD HORSE HERD MANAGEMENT AREA
PLAN (HMAP) AND GATHER PLAN**

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TABLE OF CONTENTS

1.0 Purpose and Need for the Proposed Action	3
1.1 Introduction	3
1.2 Background	3
1.3 Purpose and Need for the Proposed Action	5
1.4 Land Use Plan Conformance	6
1.5 Relationship to Laws, Regulations, and Other Plans	7
1.6 Decision to be Made	9
1.7 Scoping and Identification of Issues	9
2.0 Proposed Action and Alternatives	12
2.1 Introduction	12
2.2 Description of Alternatives Considered in Detail	12
2.3 Alternatives Considered but Dismissed from Detailed Analysis	29
3.0 Affected Environment	33
3.1 General Description	33
3.2 Description of Affected Resources/Issues	34
4.0 Environmental Consequences	46
4.1 Introduction	46
4.2 Predicted Effects of Alternatives	46
4.3 Cumulative Effects for All Alternatives	63
4.4 Reasonably Foreseeable Future Actions	65
4.5 Summary of Past, Present, and Reasonably Foreseeable Future Actions	67
5.0 Monitoring and Mitigation Measures	68
6.0 List of Preparers	68
7.0 Consultation and Coordination	68
8.0 Public Involvement	69
9.0 List of References	70
10.0 Appendices	71

1.0 Purpose and Need for the Proposed Action

1.1 Introduction

This Environmental Assessment (EA) has been prepared to analyze the Bureau of Land Management (BLM) Cedar City Field Office's (CCFO) proposes to prepare a Herd Management Area Plan (HMAP) for the Frisco Herd Management Area (HMA) and to gather and remove excess wild horses from within and outside the Frisco Wild Horse HMA in or after October 2012.

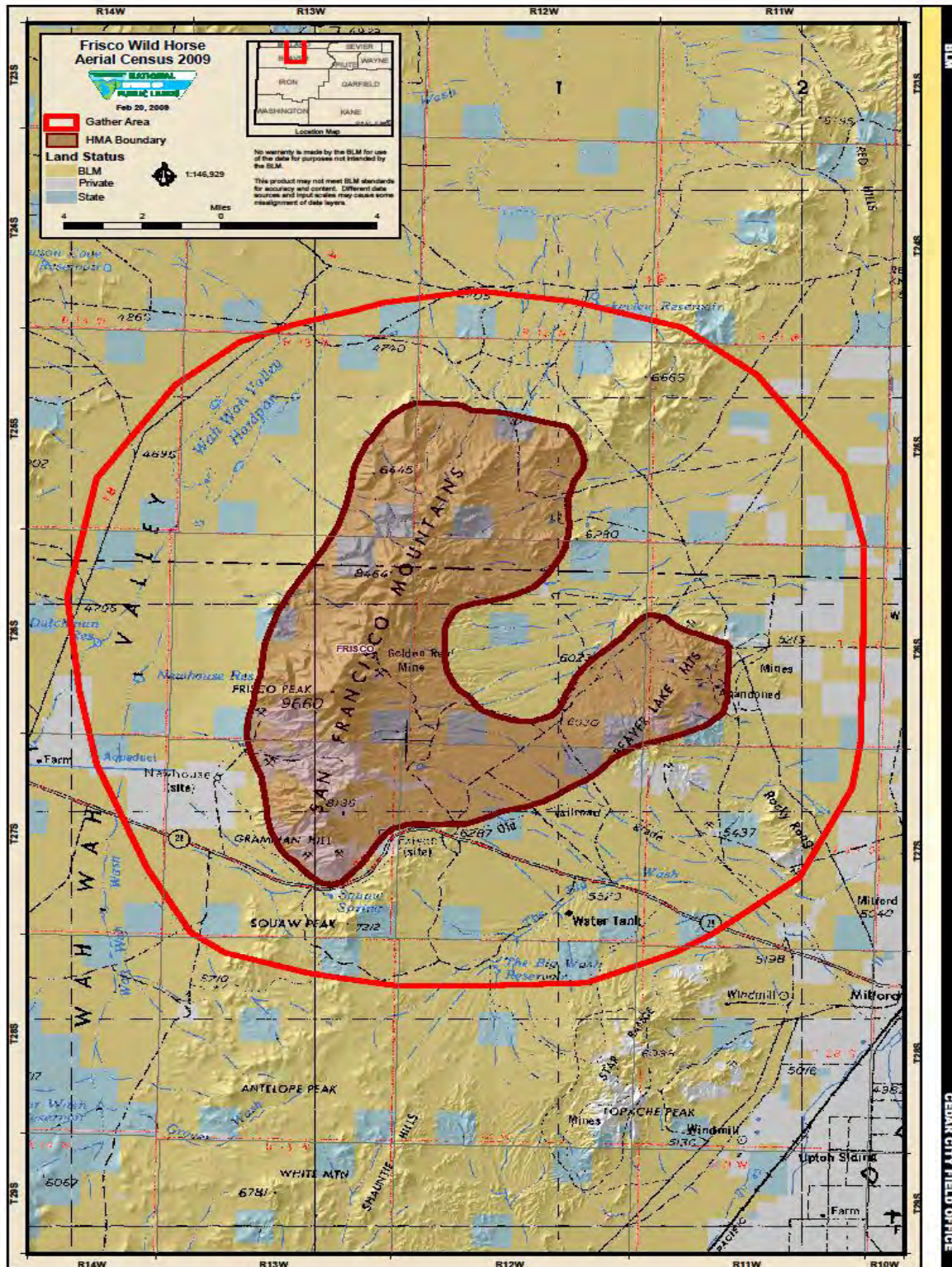
The Frisco HMAP would establish short and long term management and monitoring objectives for the wild horse herd and their habitat. These objectives would guide management of the Frisco HMA wild horses over the next 10-20 year period. The gather and removal would occur to meet current population objectives or the HMAP objectives once it is approved. This EA is a site-specific analysis of the potential impacts that could result from the implementation of the Proposed Action or alternatives to the Proposed Action. The EA assists the BLM CCFO in project planning, ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether "significant" impacts could result from the analyzed actions. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of "Finding of No Significant Impact" (FONSI).

This document is tiered to the *Pinyon Management Framework Plan/Final EIS (MFP; 1983)*. Should a determination be made that implementation of the Proposed Action or alternative actions would not result in "significant environmental impacts" or "significant environmental impacts beyond those already addressed in the MFP/EIS and MFP Record of Decision," a FONSI will be prepared to document that determination and a Decision Record issued providing the rationale for approving the chosen alternative.

1.2 Background

The Frisco HMA is approximately 60,367 acres and is located, approximately 15 miles northwest of Milford, Utah (*Map 1*). Of the 60,367 acres in the HMA approximately 48,852 of these are public land acres, 5,745 of these acres are state and 5,770 acres are private land acres. The HMA ranges from 5,600 in the valleys to 9,500 feet in elevation at the top of Frisco Peak. The wild horses primarily use the lower benches in the winter and the higher elevations in the summer.

4



The Appropriate Management Level (AML) was established for the Frisco HMA as a population range of (12-60) wild horses in the Pinyon MFP (1983), which is “the removal of horses as required to maintain horse numbers at or below 1982 inventory levels, but not less than 1971 levels.” The average estimated population on the HMA over the past 10 years has been 95 head.

The Frisco HMA currently does not have a Herd Area Management Plan (HMAP), so it is managed in accordance with the currently policies and regulations for wild horses, but does not have management objectives specific to the HMA.

Table 1. Current AML for Frisco HMA

HMA	Total Acres	Appropriate Management Level	Estimated Population	% of AML
Frisco HMA	60,367	12 -60	221	1,842%-368%
Outside	0	0	0	-
Total	60,367	12 -60	221	1,842%-368%

The estimated population of wild horses within the Frisco HMA as of October 2012 or the beginning of the Fiscal Year (FY) 2013 would be 221 wild horses. This number is based on an aerial population inventory completed in April of 2012. A mark-resight method was used. The HMA was flown 6 times with transects that were approximately 1 mile apart and in three different directions. Photos of each band of horses was taken during each transect along with additional data. The photos were reviewed with 212 head of individual horses identified in 47 bands ranging in size from 1 to 11 head with an average band size of 5 head. To estimate the wild horse population in the Frisco HMA for October 2012 a 20% increase was added to the population after the 15 foals from the April inventory were accounted for. During ground inspections of water sources during the summer of 2012 it was recorded that approximately 40 plus wild horses of the estimated 221 horses have moved northeast to feed and water sources outside the HMA.

The last gather of the Frisco HMA occurred in August of 2006. At that time, 43 wild horses were gathered, 36 removed, and 7 released back to the range. Post-gather, it was estimated that 54 wild horses with a sex ratio of 50/50 males to females remained within the HMA. Based on the most recent population inventory the 2006 population estimation was low. Additional horses may occur on the HMA for several other reasons that include, but are not limited to the following: (1) wild horses may have been captured illegally by members of the public in other wild horse areas and moved into this area (this illegal activity has been suspected in past years), (2) domestic or estray horses may have been released into the HMA.. In February of 2011 three (3) domestic horses were released just outside of the HMA and were reported to the BLM. These horses were removed from public lands with the assistance of the BLM by the Beaver County Animal Control Officer. This was one of several cases throughout Utah where domestic horses were released on to public lands.

Based upon all the information available at this time, the BLM has determined that 181 excess wild horses would exist within or near the HMA and need to be removed beginning in October of 2012. This assessment is based on the following factors including, but not limited to, the following:

- ❑ A population inventory of wild horses in April 2012 showed the Frisco HMA to have 181 excess wild horses above the lower AML in the by October of 2012.
- ❑ By October 2012 the use by wild horses would exceeding the forage allocated for wild horses in that area by over 360%.
- ❑ By comparison over the last 10 years livestock use has averaged 29% to 78% of that authorized depending on the allotment.
- ❑ Utilization monitoring, completed in 2010, documents Moderate to Heavy utilization by wild horses on key forage species within the HMA.
- ❑ Utilization monitoring, completed in early summer of 2012, documents Moderate to Heavy utilization by wild horses on key forage species within the HMA.
- ❑ Based on the wild horse inventories in 2003 and 2012 the elk numbers have increased in and around the HMA. The increased elk population on the HMA has increased the competition for forage and water resources.

1.3 Purpose and Need for the Proposed Action

The purpose and need for the Proposed Action is to establish short and long term management and monitoring objectives for the wild horse herd and their habitat. These objectives would guide management of the Frisco HMA wild horses over the next 10-20 year period. The Proposed Action would remove excess wild horses from within the Frisco HMA and to remove all horses that have moved outside the HMA. Included would be application of fertility control to mares released following the gather and adjustment of sex ratios to favor males. Any wild horses located outside the HMA (in areas not designated for their use) would also be removed.

This action is needed in order to achieve and maintain a population size within the established AML, establish short and long term management and monitoring objectives for the wild horse herd and their habitat, protect rangeland resources from further deterioration associated with the current overpopulation, and restore a thriving natural ecological balance and multiple use relationship on public lands in the area consistent with the provisions of Section 3(b)(2) of the *Wild Free-Roaming Horses and Burros Act* of 1971 (WFRHBA).¹

1.4 Land Use Plan Conformance

The Pinyon Management Framework Plan (PMFP) (1983) identifies the Frisco HMA as suitable for wild horses, and allows for, “the removal of horses as required to maintain horse numbers at or below 1982 inventory levels, but not less than 1971 levels.” (Pinyon MFP Wild Horse Amendment)(1983).

The MFP also states that the number of herd units and the population of each herd would depend on the results of monitoring studies, range condition, viewing opportunities, cooperative management, and range developments.

¹ The Interior Board of Land Appeals (IBLA) defined the goal for managing wild horse (or burro) populations in a thriving natural ecological balance as follows: “As the court stated in *Dahl vs. Clark*, supra at 594, the ‘benchmark test’ for determining the suitable number of wild horses on the public range is ‘thriving natural ecological balance.’ In the words of the conference committee which adopted this standard: ‘The goal of WH&B management should be to maintain a thriving ecological balance (TNEB) between WH&B populations, wildlife, livestock and vegetation, and to protect the range from the deterioration associated with overpopulation of wild horses and burros.’”

1.5 Relationship to Laws, Regulations, and Other Plans

In conformance with the policy developed by the BLM's Utah State Director and approved by the Secretary of Interior, the Proposed Action Alternative would be in compliance with the following:

Gathering excess wild horses is in compliance with Public Law 92-195 (WFRHBA) as amended by Public Law 94-579 (FLPMA), and Public Law 95-514 (Public Rangelands Improvement Act [PRIA] of 1978). WFRHBA, as amended, requires the protection, management, and control of wild free-roaming horses and burros on public lands. And the preparation and transport of wild horses will be conducted in conformance with all applicable state statutes.

The Proposed Action is in conformance with all applicable regulations at 43 Code of Federal Regulations (CFR) 4700 and policies. The following are excerpts from 43 CFR relating to the protection, management, and control of wild horses under the administration of the BLM.

43 CFR 4700.0-2 One of the objectives regarding wild horse management is to manage wild horses "as an integral part of the natural system of the public lands under the principle of multiple use . . ."

43 CFR 4700.0-6(a-c) Requires that BLM manage wild horses "...as self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat ... considered comparably with other resource values ..." while at the same time "...maintaining free-roaming behavior."

43 CFR 4700.0-6 (e): Healthy excess wild horses for which an adoption demand by qualified individuals exists shall be made available at adoption centers for private maintenance and care.

43 CFR 4710.3-1 "Herd management areas shall be established [through the land use planning process] for the maintenance of wild horse and burro herds. In delineating each herd management area, the authorized officer shall consider the appropriate management level for the herd, the habitat requirements of the animals, the relationships with other uses of the public and adjacent private lands, and the constraints contained in 4710.4. The authorized officer shall prepare a herd management area plan, which may cover one or more herd management areas."

43 CFR 4710.4 "Management of wild horses and burros shall be undertaken with the objective of limiting the animals' distribution to herd areas. Management of wild horses shall be at the minimum level necessary to attain the objectives identified in approved land use plans and herd management area plans."

43 CFR 4720.1 "Upon examination of current information and a determination by the authorized officer that an excess of wild horses or burros exists, the authorized officer shall remove the excess animals immediately."

43 CFR 4740.1 "(a) Motor vehicles and aircraft may be used by the authorized officer in all phases of the administration of the Act, except that no motor vehicle or aircraft, other than helicopters, shall be used for the purpose of herding or chasing wild horses or burros for capture or destruction. All such use shall be conducted in a humane manner. (b) Before using helicopters or motor vehicles in the management of wild horses or burros, the authorized officer shall conduct a public hearing in the area where such use is to be made."

Under 43 CFR 4180, it is required that all BLM management actions achieve or maintain healthy rangelands.

All federal actions must be reviewed to determine their probable effect on threatened and endangered plants and animals (the Endangered Species Act).

Section 106 of the National Historic Preservation Act requires federal agencies to determine the possible effects of their actions on historic properties (those archaeological or historic sites eligible for or listed on the National Register of Historic Places). See 36 CFR 800 for a description of this process..

Executive Order 13212 directs the BLM to consider the President's National Energy Policy and adverse impacts the alternatives may have on energy development.

The proposed Action is also in conformance with Decision Records and Finding of No Significant Impacts for the EA-UT-040-03-036 Frisco HMA Emergency Wild Horse Gather Plan, (signed 07/30/2003); EA-UT-044-98-009 Wild Horse Gather and Removal Plan FY98 (signed 01/25/00); EA-UT-044-94-007 Sulphur, Frisco, and Bible Springs Horse Removal (signed 12/23/93); and DNA-UT-040-05-045 Frisco Peak Fire Emergency Stabilization/Rehabilitation (signed 08/04/2005).

The proposed action complies with BLM Utah Riparian Management Policy (Instruction Memorandum [IM] UT-93-93, March 1993). This policy states that riparian areas will be maintained in or improved to "Proper Functioning Condition." In addition, the Proposed Action and No Action Alternative would comply with the following laws and/or agency regulations, other plans and are consistent with federal, state and local laws, regulations, and plans to the maximum extent possible.

- Taylor Grazing Act (TGA) of 1934
- FLPMA of 1976 (43 U.S.C. 1701 et seq.) as amended
- PRIA of 1978
- Endangered Species Act (ESA) of 1973, as amended
- Bald and Golden Eagle Protection Act of 1962
- BLM Manual 6840 – Special Status Species Management
- Migratory Bird Treaty Act
- Utah Comprehensive Wildlife Conservation Strategy (CWCS)
- Utah Partners in Flight Avian Conservation Strategy Version 2.0
- Birds of Conservation Concern 2002
- Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds
- IM 2008-50, Migratory Bird Treaty Act – Interim Management Guidance
- Protection, Management, and Control of Wild Free-Roaming Horses and Burros, Title 43 CFR 4700
- Standards of Quality for Waters of the State, R317-2-6, Utah Administrative Code, December, 1997
- Utah BLM Riparian Management Policy (IM UT-93-93) of 1993
- National Environmental Policy Act of 1969, as amended
- American Indian Religious Freedom Act of 1979
- Archaeological Resource Protection Act of 1979
- National Historic Preservation Act of 1966, as amended

- Appropriations Act, 2001 (114 Stat. 1009) (66 Fed. Reg. 753, January 4, 2001)
- United States Department of the Interior Manual (910 DM 1.3).
- Standards and Guidelines for Healthy Rangelands, 1997 (BLM-UT-GI-98-007-1020)
- Fundamentals of Rangeland Health, Title 43 CFR 4180

1.6 Decision to be Made

The authorized officer would determine whether to implement all, part, or none of the proposed action as described in Section 2.2.1 to manage wild horses within the HMA. The authorized officer's decision would not adjust livestock use within HMA, as this was set through previous decisions. The authorized officer's decision may set or adjust AML, select goals and objectives for management of wild horses within the Frisco HMA, select gather methods, timeframes of actions, and numbers of horses gathered, treated and released depending on the alternative or parts of any alternative chosen.

1.7 Scoping and Identification of Issues

Public Involvement was initiated on this Proposed Action on June 1, 2012 by posting on Environmental Notification Bulletin Board (ENBB). The Utah State Office initiated public involvement at a public hearing about the use of helicopters and motorized vehicles to capture and transport wild horses (or burros) on July 13, 2012 at the BLM's Fillmore Field Office in Fillmore, Utah. This specific gather was addressed at that public meeting as well as other gathers that may occur within the state of Utah over approximately the next 12 months. This meeting was advertised in papers and radio stations statewide. Refer to section 8.0 Public Involvement and Appendix 11 to see comments and interest from the public and organizations.

Based on internal scoping and experience with previous HMAPs, and gathers, the following issues have been identified:

1. Sustain Healthy Populations of wild horses:

- Adjustment of sex ratios to "natural" percentages
- Age Distribution
- Genetic mix (diversity)
- Population control
- Gather and Handling Methods

2. Health wild horse habitat. Measurement indicators for this issue include:

- Rangeland Health
- Potential impacts to vegetation/soils and riparian/wetland resources.
- Disperse Wild Horse Use (forage utilization).

3. Impacts to individual wild horses and the herd. Measurement indicators for this issue include:

- Projected population size and annual growth rate (Win Equus population modeling);
- Expected impacts to individual wild horses from stress due to handling;
- Expected impacts to herd social structure;
- Expected effectiveness of proposed fertility control applications;
- Potential effects to genetic diversity; and
- Potential impacts to animal health and condition.

4. Impacts to wildlife, migratory birds, and threatened, endangered, and special status species and their habitat. Measurement indicators for this issue include:
- Potential for temporary displacement, trampling, or disturbance;
 - Potential competition for forage and water over time.
 - Inadequate or poorly maintained water sources to spread forage use of the HMA by wild horses?

1.7.1 Critical Elements of the Human Environment and other Resources/Areas of Concern

Identification of issues for this assessment was accomplished by considering the resources that could be affected by implementation of one of the alternatives, through involvement with the public and input from the BLM interdisciplinary team.

Critical elements of the human environment, as identified in BLM Handbook 1790-1, Appendix 5, must be considered. Resources within the project area that may be affected must also be discussed. Those critical elements of the human environment and resources which are not present, or are not affected by the Proposed Action or alternatives, are included as part of the Interdisciplinary team checklist (Appendix 1). Rationale for dismissing specific resources or critical elements is also contained in Appendix 1.

Those critical elements of the human environment and resources which may be affected by the Proposed Action and/or alternatives are carried forward throughout this analysis, and are discussed briefly as follows.

1.7.1.1 Rangeland Health/Vegetation

Set wild horse management objectives in order to sustain healthy rangelands with the population of wild horses managed or controlled within AML.

Drought conditions and overpopulation of wild horses in 2002, 2006-2009 and 2012 have reduced forage production in some of the key wild horse habitat areas. Although livestock numbers were reduced and/or completely removed from the pastures of the allotments in the Frisco HMA during these years excess wild horses overgrazed many areas during critical growth periods. This, along with the reduced vigor of the plants because of the drought, caused mortality of key forage species throughout the HMA. Inadequate residual vegetation (forage) and litter remaining on certain key use areas allowed soil loss and erosion. As of June 30, 2012 precipitation data indicate that the HMA has received only 59% of normal moisture with almost 50% coming at the last of June in short duration thunderstorms outside the growing season. This places the HMA in extreme drought going in to the 2012 summer. Utilization completed June 25, 2012 showed heavy use within 1 mile of riparian areas and water sources used by wild horses. The use on vegetation on the rest of the HMA ranged from light to moderate. These use levels normally occur on the HMA at the end of summer and not the beginning. Appendixes 2-4 contain the Rangeland Health Standards and Guidelines.

1.7.1.2 Livestock Grazing

Portions of five (5) grazing allotments are part of the HMA. All of these allotments have livestock grazing privileges. Of these, three (3) are sheep allotments (Crystal Peak, Frisco, and Red Rock) and two are cattle allotments (Beaver Lake and Wah Wah Lawson). Overlap of areas of use between wild horses and livestock does occur on specific sites on all the allotments causing competition for forage, water, and cover. Wild horses, wildlife, and livestock compete directly for the same cover, water, and forage

resources. Year-long wild horse grazing reduces forage availability for livestock. Grazing by excess wild horses during the critical growing season and during drought conditions can reduce forage production, vigor, reproduction, and availability for several years. Detailed information about the authorized livestock use within the HMA is provided in Term Grazing Permit Renewal EAs EA-UT-040-06-35, EA-UT- 040-06-36 and DOI-BLM-UT-C010-2011-0034 for these allotments.

1.7.1.3 Wildlife including: (T & E, BLM Special Status Species and Migratory Birds)

Setting short and long term management objectives for wild horses should minimize the displacement, trampling, or disturbance to wildlife. Reduce the competition for forage between wild horses and wildlife, particularly big game.

Wild horse numbers over AML result in increased competition for forage with wildlife, particularly big game. The removal of excess wild horses reduces this competition.

1.7.1.4 Wild Horses and Burros

A need to set short and long term objectives to maintain population size within AML using a variety of population control methods while maintaining wild horse health.

Rangeland resources and wild horse health have been and are currently being affected within the Frisco HMA, due to drought and overpopulation. Excess wild horses above the AML have reduced available water and forage, resulting in increased competition for available resources. Wild horses have expanded outside of the HMA in search of forage, water, and cover. The gather and removal of wild horses from the Frisco HMA would have direct and indirect impacts to individual animals and the social structure of bands in the area. Most impacts would be short term (under 1 year), but some would be long term (greater than a year). These impacts will be discussed within this EA.

1.7.1.5 Wetlands/Riparian Zones

SOPs for the gather would have limited to no impacts on riparian wetland zones. Long term impacts of management and population control of wild horse herds would improve overall functionality of riparian/wetland areas in the Frisco HMA.

2.0 Proposed Action and Alternatives

2.1 Introduction

This section of the EA describes the Proposed Action and alternatives, including any that were considered but eliminated from detailed analysis. Five alternatives are considered in detail:

- Alternative 1: No Action – Continue Existing Management. No Gather and Removal
- Alternative 2: Proposed Action – Implement HMAP with a management strategy which would include a number of population control methods, together with the development of new and/or reconstruction of existing water developments. Adjustment to the low AML to maintain some breeding animals. Gather/removal of excess wild horses, and apply fertility control two to four times over a six to ten year period .
- Alternative 3: Implement HMAP with a management strategy which would include some population control methods, together with maintenance and reconstruction of existing water developments. Adjustment of AML. Gather/removal of excess wild horses, apply fertility control including release of geldings as part of the male population.
- Alternative 4: No Action on HMAP. Gather and Removal with Fertility control as outlined in Alternative 2 (Proposed Action).
- Alternative 5: No Action on HMAP. Gather and Removal without fertility control.

2.2 Description of Alternatives Considered in Detail

Management Actions Common to All HMAP Alternatives and Alternatives 2-5 for Gather and Removal

- ☐ Gather operations would be conducted in accordance with the Standard Operating Procedures (SOPs) described in Appendix 5 and/or the National Wild Horse Gather Contract as adjusted or amended through the National and State wild horse and burro program direction.
- ☐ When gather objectives require gather efficiencies of 50-80% or more of the animals to be captured from multiple gather sites (traps) within the Frisco HMA, the helicopter drive method and helicopter assisted roping from horseback will be the primary gather methods used. To the extent possible gather sites (traps) will be located in previously disturbed areas. Post-gather, every effort would be made to return released animals to the same general area from which they were gathered.
- ☐ Given a summer or early fall gather window, bait and/or water trapping may be used provided the gather operations timeframe is consistent with current animal and resource conditions. Bait and/or water trapping may also be selected in other special circumstances as appropriate.
- ☐ An Animal and Plant Inspection Service (APHIS) or other licensed veterinarian may be on-site during future gathers, as needed, to examine animals and make recommendations to BLM for care and treatment of wild horses. Decisions to humanely euthanize animals in field situations will be made in conformance with BLM policy.
- ☐ Animals would be removed using a selective removal strategy. Selective removal criteria for the Frisco HMA include: (1) First Priority: Age Class - Four Years and Younger; (2) Second Priority: Age Class – Eleven to Nineteen Years Old; Third Priority: Age Class Five to Ten.
- ☐ Data including sex and age distribution, reproduction, survival, condition class information (using the Henneke rating system), color, size and other information may also be recorded, along with the disposition of that animal (removed or released).
- ☐ Hair and/or blood samples would be acquired every gather, to determine whether BLMs management is maintaining acceptable genetic diversity (avoiding inbreeding depression).

2.2.1 Proposed Action and Alternatives

Alternative 1: No Action Alternative -- Continue Existing Management/No Gather and Removal

Under this Alternative, the HMA would be managed as a range of 12-60 animals as follows:

- The sex ratio of animals released back to the range following future gathers would be approximately 50% males and 50% females.
- Studies will be continued and improved to determine and monitor mortality, age structure, sex ratio, productivity, population growth rate, habits and movements.
- Existing monitoring including: utilization, forage condition, water availability, animal health and periodic population census and sampling for genetic diversity would continue.
- Existing water developments would be periodically maintained, but not replaced or reconstructed when they outlive their useful life.
- AML would be adjusted, as needed, based on remaining available water resources.
- Fertility control would not be applied to animals released back to the range following future gathers.

Table 1. No Action (Continue Existing Management) in HMAP Format

Management Objective(s)	Monitoring Objective(s)	Implementation Objective(s)
<u>A. Control Population Numbers</u> Manage wild horse populations within the established AML range to protect the range from deterioration associated with overpopulation.	Population Inventories a minimum of once every 3-4 years. Additional inventories as money and time allows. Determine population number and annual growth rate.	Schedule gathers to remove excess wild horses when the total wild horse population exceeds the AML for the HMA (about every 3-4 years), when animals permanently reside on lands outside the Frisco HMA boundaries (i.e. use is more than seasonal drift), or whenever animal health/condition is at risk.
<u>B. Age Distribution</u> Assure all age classes are represented post-gather.	Monitor post-gather results.	Manage wild horses to achieve the following relative age distribution: <ul style="list-style-type: none"> • 35% Young Age Class (Ages 0-4) • 50% Middle Age Class (Age 5-10) • 15% Old Age Class (Age 11+)
<u>C. Additional Selective Removal Criteria</u> Objective 1: Maintain or improve animal conformation over the next ten years.	Maintain photos of wild horse released back into the HMA and/or are introduced to the HMA.	In selecting animals for return to the range post-gather, animal size and conformation will have priority over color.
<u>D. Assure Rangeland Health</u> Objective 1. Assess rangeland health approximately every 10 years on BLM administered lands.	Locate key monitoring areas within the HMA. Assess rangeland health using	Complete the rangeland health assessment for the HMA as a whole. Summarize trend, precipitation, riparian, utilization and use pattern

<p>Objective 2. Limit utilization by all herbivores to 50% of the current year's above ground primary production for key grasses and 45% for key shrubs and forbs.</p>	<p>procedures outlined in Technical Reference 1734-6 and/or the most recent rangeland health technical reference adopted by the local district office.</p> <p>Establish baseline trend studies using the frequency sampling procedures as outlined in the Rangeland Monitoring Handbook.</p> <p>Measure utilization at key areas/use pattern mapping annually.</p>	<p>mapping every 10 year.</p> <p>Establish additional site-specific resource management objectives for key areas, as needed.</p> <p>Based on above, re-adjust AML or identify management actions to address/resolve rangeland health issues, as needed/appropriate. Re-adjustments in AML will be based on vegetation monitoring, herd monitoring and water availability as the limiting factors.</p>
<p><u>E. Sustain Healthy Populations of Wild Horses</u></p> <p>Objective 1: Manage wild horses to achieve an average body condition class score of 3+.</p>	<p>Visually observe wild horse body condition (Henneke Condition Class Method) key watering locations annually.</p> <p>Record average body condition and document during periodic gather and population inventories operations.</p>	<p>Reconstruct existing water developments to assist in limiting the distance horses trail to and from water sources.</p> <p>Annually maintain water developments.</p> <p>Conduct emergency removals when needed if animal body condition is less than Henneke condition class score 3 due to drought, wildfire or other unplanned/unforeseen event.</p>
<p><u>F. Sex Distribution</u></p> <p>Adjust the sex ratio immediately following gathers to "natural" percentages (50% females/50% males) consistent with past management actions.</p>	<p>Document number of mares and stallions released following each gather.</p>	<p>Manage a breeding population of 12-60 animals within any given 3 year period.</p>

No Gather and Removal

Under the No Action Alternative, no gather would occur and no additional management actions would be undertaken to control the size of the wild horse population at this time.

Alternative 2: Proposed Action (Proposed HMAP with gather, removal and treatment)

The Proposed Action would implement a management strategy which would incorporate a number of population control methods, together with the development and/or maintenance or reconstruction of existing water sources. Under this strategy, wild horses would be managed within an AML range of 30-60 animals over the next 10-20 year period, as follows:

- Approximately 30-60 animals would be managed as a breeding population.
- During future gathers, the sex ratio of the population would be adjusted slightly in favor of males as compared to females (60/40 male/female sex ratio).
- Horses that display good confirmation and a variety of colors would be selected first to be placed back on the HMA.
- Every 4-5 years 1-3 studs or mares from a different HMA, with similar or desired characteristics of the horses within the Frisco HMA will be released to maintain the genetic diversity on the HMA.
- Excess animals would be removed to the low-range of the AML upon determination that excess animals are present.
- Immunocontraceptive research would be conducted in accordance with the approved standard operating and post-treatment monitoring procedures. Breeding age mares selected for release back to the range would be treated with Porcine Zona Pellucida (PZP) vaccine or other fertility control vaccines, which would slow reproduction of the treated mares for one to three breeding seasons.
- Any new fertility controls could be used as directed through the most recent direction of the National Wild Horse and Burro Program. The use of any new fertility controls would use the most current best management practices and humane procedures available for the implementation of the new controls.
- A minimum of two and up to four water developments (wells, pipelines, storage tanks, troughs, etc...) would be development, maintained or reconstruction over the next ten to twenty year period within the Frisco HMA. Additional NEPA would be needed to complete these projects.

Table 2. Alternative 2 (Proposed Action/Proposed HMAP) in HMAP Format

Management Objective(s)	Monitoring Objective(s)	Implementation Objective(s)
Items A-E from Table 1 above, plus the following:		
<u>F. Assure Genetic Diversity</u> Maintain genetic diversity within the herd (avoid inbreeding depression) as evidenced by no additional loss (>10%) of genetic diversity (H_o) over the next twenty years.	Collect blood and/or hair samples every gather to detect any changes from the baseline genetic diversity ($H_o=.329$).	Every gather 1-3 studs or mares from a different HMA, but displaying similar or desired characteristics of the horses within the Frisco HMA will be released to maintain the genetic diversity on the HMA. If baseline genetic diversity changes decrease more than 10% additional wild horses will be introduced into the HMA.
<u>G. Assure Riparian/Wetland Area Health</u> Objective 1: Improve riparian condition throughout the HMA.	Re-evaluate riparian functionality every ten years using the Proper Functioning Condition (PFC) method on all	Reconstruct the existing spring developments, pipelines, troughs, and ponds within the HMA to provide water for use by wild horses. Develop new wells, ponds and pipelines within the HMA.

<p>Objective 2: Develop new water sources (ie wells, ponds, pipelines) away from riparian areas to reduce wild horses use in riparian areas.</p>	<p>riparian areas in the HMA.</p> <p>Assess utilization annually.</p> <p>Monitor use of water sources with the use of wildlife cameras to determine season of use and numbers using the sources.</p>	<p>If trend conditions remain static or are downward by 2022, exclosure fences may be constructed to promote riparian recovery, or additional management measures, including, adjusting AML, or continued development of off-site water for wild horses could be considered where feasible.</p>
<p><u>H. Disperse Wild Horse Use</u></p> <p>Objective 1: Decrease utilization by wild horses within a 1-3 mile radius of existing water sources within HMA from heavy/severe to light/moderate by 2020.</p> <p>Objective 2: Ensure adequate water is available throughout the hot summer months until additional water sources can be developed.</p> <p>Objective 3: Disperse wild horse use throughout the Frisco HMA.</p>	<p>Measure utilization at key areas/use pattern mapping annually.</p> <p>Monitor water sources continuously through the summer months to ensure adequate water availability and to determine if/when supplemental water hauling will be needed.</p> <p>Monitor utilization to determine whether construction of new water developments is effective in reducing wild horse utilization from heavy to light or moderate within the Frisco HMA.</p>	<p>Construct new water developments and vegetative treatments that provide increased water and forage availability.</p> <p>Reconstruct existing water developments and maintain vegetation treatments that produce forage to assist in limiting the distance horses trail to and from water sources.</p> <p>Annually maintain water developments following reconstruction.</p> <p>Develop a minimum of two and up to four water sources to better disperse wild horse use. Prior to construction of any new water developments, the following would be required:</p> <ul style="list-style-type: none"> ✓ Acquisition of the necessary water rights. ✓ Planning and design of the water developments. ✓ Completion of a site-specific environmental analysis. ✓ Completion of a site-specific cultural resource inventory. ✓ Acquisition of necessary funding. <p>Annually maintain developments following construction and/or reconstruction.</p> <p>Haul water during time of drought to provide water in areas with adequate forage.</p>
<p><u>I. Additional Population Control Measures</u></p>	<p>Document the number of</p>	<p>Manage a breeding population of 30-60 animals within any given 4-7 year period.</p>

<p>Objective 1: Adjust the sex ratio of the breeding population slightly in favor of males.</p> <p>Objective 2: Gather to the low-range of the AML and apply fertility control to mares released back to the range following future gathers.</p>	<p>mares/stallions released following each gather. Conduct post-fertility control monitoring in accordance with established procedures Appendix 6.</p>	<p>Within the population, achieve a 60%/40% ratio of males to females immediately following future gathers.</p> <p>Immunocontraceptive research would be conducted in accordance with the approved standard operating and post-treatment monitoring procedures. Breeding age mares selected for release back to the range would be treated with Porcine Zona Pellucida (PZP) vaccine that would slow reproduction of the treated mares for one to three breeding seasons.</p> <p>New population control vaccines and/or methods may be use within the HMA as directed through the most recent direction of the National Wild Horse and Burro Program. The use of any new fertility controls would use the most current best management practices and humane procedures available for the implementation of the new controls.</p>
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Gather and Removal

Management Actions Common to Alternatives 2 - 5

- ❑ The first gather is planned to begin in October 2012 and take about 6 days to complete. Several factors such as animal condition, herd health, weather conditions, holding capacity limitations or other considerations could result in adjustments in the schedule.
- ❑ Additional gathers over the next 10 years may be needed to reach the lower AML based on gather success, holding capacity limitations, population growth rates and other national gather priorities. Additional gathers would be based on a two year gather cycle for the treatment of PZP.
- ❑ Gather operations would be conducted in accordance with the Standard Operating Procedures (SOPs) described in Appendix 5 and/or the National Wild Horse and Burro Gather Contract. The primary gather (capture) methods would be the helicopter drive method with occasional helicopter assisted roping (from horseback). Bait trapping including water trapping may also be used during following years to meet objectives to reach the lower AML.
- ❑ Trap sites and temporary holding facilities will be located in previously used sites or other disturbed areas whenever possible. Undisturbed areas identified as potential trap sites or holding facilities would be inventoried for cultural resources. If cultural resources are encountered, these locations would not be utilized unless they could be modified to avoid impacts to cultural resources.
- ❑ An Animal and Plant Inspection Service (APHIS) or other veterinarian may be on-site during the gather, as needed, to examine animals and make recommendations to BLM for care and treatment of wild horses. For bait trapping veterinarian services would be provided at the holding facilities.
- ❑ Decisions to humanely euthanize animals in field situations will be made in conformance with BLM policy (Washington Office Instruction Memorandum 2009-041). Current policy reference:

http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2009/IM_2009-041.html

- ❑ Data including sex and age distribution, condition class information (using the Henneke rating system), color, size and other information may also be recorded, along with the disposition of that animal (removed or released).
- ❑ Excess animals would be transported to a BLM corral facility where they will be prepared (freeze-marked, vaccinated and de-wormed) for adoption, sale (with limitations) or long-term holding.

Alternative 2 Gather and Removal

The Proposed Action (Alternative 2) Gather and Removal would be a pilot management alternative designed to address large scale wild horse gathers while still achieving BLM's management goals of attaining AML, reducing population growth rates, and obtaining a thriving natural ecological balance on the range as identified within the WFRHBA. The pilot alternative would also address holding capacity limitations within short and long-term holding facilities by targeting smaller removal numbers versus what is needed to immediately reach low AML.

Under the Proposed Action, the BLM would gather approximately 70%-75% of the existing wild horses (approximately 155-166 animals in the initial 2012 gather) every two to three years with a target removal of approximately 40-120 excess wild horses per gather over a period of six to ten years. The principal management goal for the HMA would be to retain a core breeding population of 30-60 wild horses, which is the AML. To help reduce population growth rates, the core breeding population would be managed to achieve a 60% male sex ratio and all mares released back to the HMA would be treated with fertility control (PZP-22 or most current formulation). The combination of these actions should lower the population growth rate within the HMA. Since proposed action in winter 2012 would only allow for the removal of approximately 104 excess wild horses, dependent on available holding space, and would not achieve the desired low end of AML; it is anticipated that two to four follow-up gathers over a period of six to ten years would be needed to achieve the low end of AML for the HMA based on current population estimates, projected rates of increase, and projected scheduling of future gathers. This will also allow the BLM to implement the population control components (PZP treatments and sex ratio adjustment) as proposed. Population inventories and routine resource/habitat monitoring would be completed between gather cycles to document current population levels, growth rates, and areas of continued resource concern (horse concentrations, riparian impacts, over-utilization, etc.) prior to any follow-up gather. Any follow-up gather activities would be conducted in a manner consistent with those described for the winter 2012 gather and would be conducted during the period November through February which is identified for maximum effectiveness of the fertility control. Funding limitations and competing priorities may require delaying the follow-up gather and population control component. Bait or water trapping could be conducted during the months of July to September, but mares would be held until October so that PZP could be administered before release.

Under the Proposed Action a sufficient number of wild horses would be gathered from heavily concentrated areas within the project area to reduce resource impacts and all wild horses residing in areas adjacent to the HMA (outside established boundaries) would be gathered and removed. Fertility control (PZP-22 or most current formulation) would be applied to all released mares to decrease the future population growth rate. By completing the gather in the proposed fashion, the BLM will be able to treat a larger number of mares with fertility control and continue the treatments with future gather compared to a gather operation that goes to low AML immediately where very few mares would be treated with the first gather. The procedures to be followed for implementation of fertility control is detailed in Appendix 6. Stallions would be selected for release to adjust the sex ratio of the core breeding population to 60% male

sex ratio. Every 4-5 years 1-3 studs or mares from a different HMA, with similar or desired characteristics of the horses within the Frisco HMA will be released to maintain the genetic health on the HMA. All horses identified to remain in the HMA population would be selected to maintain a diverse age structure, herd characteristics and body type (conformation).

Alternative 3: HMAP with adjusted AML, gather, remove and treat with release of geldings

Alternative 3 would implement a management strategy which would include some population control methods, together with the development, together with development, and reconstruction of existing water developments. Under Alternative 3, wild horses would be managed within the established AML range of 50 to 100 animals over the next 10-20 year period, as follows:

- Approximately 40% of the male population of the herd (about 20-40 animals) would be managed as a non-breeding population of geldings.
- The balance of the herd (or about 30 - 60 animals) would be managed as a breeding population.
- Sex ratio of the breeding population would be maintained at about half males and half females over time.
- Excess animals would be removed to the low-range of the AML range upon determination that excess animals are present.
- Immunocontraceptive research would be conducted in accordance with the approved standard operating and post-treatment monitoring procedures. Breeding age mares selected for release back to the range would be treated with Porcine Zona Pellucida (PZP) vaccine which would slow reproduction of the treated mares for one to three breeding seasons (see Appendix 6 for the current SOPs for the use of PZP vaccine and post-treatment monitoring).
- Existing water developments would be reconstructed over the next 1-5 year period and maintained annually to the construction standard, or as needed.

The upper AML in this alternative is the average population of wild horses in the HMA between 2002 and 2012. The estimated population ranged from 35 to 221 during this time.

Table 3. Alternative 3 in HMAP Format

Management Objective(s)	Monitoring Objective(s)	Implementation Objective(s)
Items A-E from Table 1, together with Items F-G in Table 2 above, plus the following:		
<u>H. Disperse Wild Horse Use</u> Objective 1: Decrease utilization by wild horses within a 1-3 mile radius of Water Sources from heavy/severe to light/moderate by 2025. Objective 2: Ensure adequate water is available throughout the hot summer months in areas with adequate forage to sustain Healthy wild horses. Objective 3: Disperse wild horse use throughout the Frisco HMA.	Measure utilization at key areas/use pattern mapping annually. Monitor water sources continuously through the summer months to ensure adequate water availability and to determine if/when supplemental water hauling will be needed. Monitor utilization to determine whether maintenance and	Develop water sources and vegetative treatments that provide increased water and forage availability. Reconstruct existing water developments and maintain vegetation treatments that produce forage to assist in limiting the distance horses trail to and from water sources. Annually maintain water developments following reconstruction.

	reconstruction of existing water developments is effective in reducing wild horse utilization from heavy to light or moderate within the Frisco HMA.	
<p><u>H. Additional Population Control Measures</u></p> <p>Objective 1. Manage a portion of the herd as a non-breeding population of geldings.</p> <p>Objective 2: Gather to the low-range of AML and apply fertility control to mares released back to the range following future gathers (pending additional site-specific environmental analysis and population modeling).</p>	<p>Document number of mares/stallions and geldings released following each gather; conduct post-fertility control monitoring as outlined in Appendixes 6 and 7.</p> <p>Periodic population inventories, together with gather data from future gathers, will be used to determine whether managing a portion of the Frisco HMA herd as geldings is effective in slowing the average annual population growth.</p> <p>The herd behavior of geldings post-treatment would also be observed. Anecdotal evidence suggests geldings will form bachelor bands. Monitoring will be completed to determine whether bachelor bands form as expected, or if geldings intermix with the breeding population.</p>	<p>Manage a breeding population of 30-60 animals and a small non-breeding population of 20-40 geldings within any given 10 year period. Within the breeding population, achieve a 50%/50% ratio of males to females immediately following future gathers. The following management requirements apply to the non-breeding population:</p> <ul style="list-style-type: none"> ✓ Limit gelding to stallions between 5 and 15 years of age ✓ Limit geldings to stallions that have a Henneke body condition score of 4 or above. ✓ Surgery would be performed at a temporary holding facility, at a BLM managed holding center, or in the field by a Utah licensed veterinarian in good standing, using appropriate anesthetic agents and surgical techniques. ✓ When gelding is done in the field, geldings would be released near a water source approximately 24-48 hours following surgery. When the gelding is performed at a BLM-managed facility, selected stallions would be shipped to the facility, gelded, held in a separate pen to minimize risk for disease, and returned to the range near water within 30-60 days following recovery (recovery is indicated by animals moving freely to/from forage and water). ✓ Gelded animals would be monitored for approximately

		<p>7-10 days post-surgery.</p> <p>✓ Gelded animals would be freeze branded and the brand recorded as a gelded horse released in the HMA.</p> <p>Immunocontraceptive research would be conducted in accordance with the approved standard operating and post-treatment monitoring procedures. Breeding age mares selected for release back to the range would be treated with Porcine Zona Pellucida (PZP) vaccine that would slow reproduction of the treated mares for one to three breeding seasons.</p> <p>New population control vaccines and/or methods may be use within the HMA as directed through the most recent direction of the National Wild Horse and Burro Program. The use of any new fertility controls would use the most current best management practices and humane procedures available for the implementation of the new controls.</p>
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Alternative 3 Gather and Removal

Alternative 3 would gather about 200 and remove approximately 170 excess wild horses from within and outside the Frisco Herd Management Area (HMA) beginning in October 2012. Beginning gather dates may change based on several factors. Animals would be removed using a selective removal strategy. Selective removal criteria for the HMA include: (1) First Priority: Age Class - Four Years and Younger; (2) Second Priority: Age Class – Eleven to Nineteen Years Old; (3) Third Priority: Age Class - Five to Ten Years Old; (4) Fourth Priority: Age Class – Twenty Years and Older. Up to 30 head of the captured wild horses would be released; of these, approximately 10 head would be mares treated with fertility control and about 20 head would be studs (or geldings). If gather success, holding capacity limitations, population growth rates, other national gather priorities or other factors do not allow for achievement of the goal to bring the population down to the lower AML then the gather operation would be repeated two to four times in the next ten years to achieve the goal.

In addition, it is proposed to manage for a non-breeding component of 20-40 geldings, which would bring the overall population to approximately 50-100 wild horses within the HMA. During the first gather operation, approximately 10-15 stallions would be gelded (castrated) and released back into the HMA representing a non-reproductive component in the HMA. Additional geldings would also be phased-in over the next two to three gathers in order to observe how the geldings are transitioning into the overall population as well as utilizing their habitat. The procedures to be followed for gelding of stallions are

detailed in the Gelding SOPs in Appendix 7. With this non-breeding component, the HMA would be managed over the long term at mid-range of 75 wild horses.

The Proposed Action reflects the proposed management strategies are consistent with the intent of the WFRHBA to use sterilization as a means of population control.

Alternative 4: No Action on HMAP. Gather and Removal With Fertility control.

No HMAP would be determined at this time. No specific management goals or objectives would be determined for the Frisco HMA at this time. The Frisco HMA would continue to be managed in accordance with current policies and regulations.

Gather and Removal would be conducted as outline in the Alternative 2 Proposed Action's Gather and Removal section. The BLM would gather approximately 70%-75% of the existing wild horses (approximately 166 animals in the initial 2012 gather) every two to three years with a target removal of approximately 40-120 excess wild horses per gather over a period of six to ten years. The principal management goal for the HMA would be to retain a core breeding population of 30-60 wild horses, which is the AML. To help reduce population growth rates, the core breeding population would be managed to achieve a 60% male sex ratio and all mares released back to the HMA would be treated with fertility control (PZP-22 or most current formulation). The combination of these actions should lower the population growth rate within the HMA. Since proposed action in winter 2012 would only allow for the removal of approximately 104 excess wild horses, dependent on available holding space, and would not achieve the desired low end of AML; it is anticipated that two to four follow-up gathers over a period of six to ten years would be needed to achieve the low end of AML for the HMA based on current population estimates, projected rates of increase, and projected scheduling of future gathers. This will also allow the BLM to implement the population control components (PZP treatments and sex ratio adjustment) as proposed. Population inventories and routine resource/habitat monitoring would be completed between gather cycles to document current population levels, growth rates, and areas of continued resource concern (horse concentrations, riparian impacts, over-utilization, etc.) prior to any follow-up gather. Any follow-up gather activities would be conducted in a manner consistent with those described for the winter 2012 gather and would be conducted during the period November through February which is identified for maximum effectiveness of the fertility control. Funding limitations and competing priorities may require delaying the follow-up gather and population control component.

Under the Proposed Action a sufficient number of wild horses would be gathered from heavily concentrated areas within the project area to reduce resource impacts and all wild horses residing in areas adjacent to the HMA (outside established boundaries) would be gathered and removed. Fertility control (PZP-22 or most current formulation) would be applied to all released mares to decrease the future population growth rate. By completing the gather in the proposed fashion, the BLM will be able to treat a larger number of mares with fertility control and continue the treatments with future gather compared to a gather operation that goes to low AML immediately where very few mares would be treated with the first gather. The procedures to be followed for implementation of fertility control is detailed in Appendix 6. Stallions would be selected for release to adjust the sex ratio of the core breeding population to 60% male sex ratio. Every 4-5 years 1-3 studs or mares from a different HMA, with similar or desired characteristics of the horses within the Frisco HMA will be released to maintain the genetic health on the HMA. All horses identified to remain in the HMA population would be selected to maintain a diverse age structure, herd characteristics and body type (conformation).

Alternative 5: No Action on HMAP. Gather and Removal Without Fertility control.

No HMAP would be determined at this time. The goals and objectives for management of the wild horses within the Frisco HMA would be general. No specific goals or objectives would be determined for the Frisco HMA at this time.

The Proposed Action would gather about 200 and remove approximately 180 excess wild horses from within and outside the Frisco Herd Management Area (HMA). The gather would be planned to begin October 2012. If gather objectives are not met additional gathers in following years would occur until the population reaches 40 head. Animals would be removed using a selective removal strategy. Selective removal criteria for the HMA include: (1) First Priority: Age Class - Four Years and Younger; (2) Second Priority: Age Class – Eleven to Nineteen Years Old; (3) Third Priority: Age Class - Five to Ten Years Old; (4) Fourth Priority: Age Class – Twenty Years and Older. Up to 20 head of the captured wild horses would be released; of these, approximately 10 head would be mares and 10 head would be studs. Studs and mares would be selected for release back in to the HMA to maintain a diverse age structure, herd characteristics and body type (conformation). Post-gather, every effort would be made to return released horses to the same general area from which they were gathered.

Table 5. Summary Comparison of the Impacts of the Alternatives for HMAP

Item	Alternative 2 (Proposed HMAP)	Alternative 3	Alternative 4-5		No Action
Population Management Range	The Frisco HMA wild horses would be managed within the established AML range of 30-60 animals, over the next 10-20 year period, or until AML is adjusted as described below.	The Frisco HMA wild horses would be managed within the established AML range of 50-100 animals, over the next 10-20 year period, or until AML is adjusted as described below.	Same as No Action		The Frisco HMA wild horses would be managed within the established AML range of 12-60 animals, over the next 10-20 year period, or until AML is adjusted as described below.
Population Control Methods	Future gathers to remove excess wild horses would be implemented under all alternatives as outlined below.				
	Additional population control methods include slightly adjusting the sex ratio in favor of males immediately following future gathers, and applying fertility control to mares released post-gather.	Additional population control methods include managing a portion the herd as a non-breeding population of geldings, and applying fertility control to mares released post-gather.	Apply fertility control to mares released post-gather.	Same as No Action	No additional population control methods would be applied under this alternative.

Size – Breeding Population	100%	50%-60%	100%		100%
Size – Non-breeding Population	0 (no geldings)	20-40 animals managed as geldings	0 (no geldings)		0 (no geldings)
Desired Sex Ratio	60/40 Males/Females	50/50 Males/Females	No Action		50/50 Males/Females
Approx. # Mares Treated with Fertility Control During October 2012 Gather	31	10	31	0	0
Total # Wild Horses Remaining Following October 2012 Gather	117 (Double upper AML)	50 (Low-range AML)	117 (low-range AML)		N/A
Total # Wild Horses Remaining Following Future Gathers	30 (Low-range AML)	50 (Low-range AML)	12 (Low-range AML)		12 (Low-range AML)
Age Distribution	Future gathers will ensure representation of all age classes based on the following relative age distribution: 35% young, 50% middle and 15% older.				
Selective Removal Criteria	Selection would focus on returning animals with good conformation or size as compared to color over the next twenty years.				
Genetic Diversity	Maintain genetic diversity within the herd (avoid inbreeding depression, i.e. maintain H _o at .329 (+ or – 10%)).	Maintain genetic diversity within the herd (avoid inbreeding depression, i.e. maintain H _o at .329 (+ or – 10%)).	Same as No Action		No objective
	Under Alternatives 2, if future genetics sampling indicates greater than 10% loss in H _o over the next 1-20 years, 1-3 studs and/or mares from genetically similar	Under Alternatives 2, if future genetics sampling indicates greater than 10% loss in H _o over the next 1-20 years, 1-3 studs and/or mares from genetically similar HMAs	Same as No Action		No mitigation to correct potential future genetic loss would be implemented under this alternative.

	HMA's would be introduced every other gather.	would be introduced every other gather.		
Rangeland Health	Utilization by all herbivores is limited to 50% of current year's production for key grasses and 45% for key shrubs and forbs. Rangeland health evaluation to be completed every 10 years on BLM administered lands.			
	Locate key areas within the Frisco HMA. Assess rangeland health and establish frequency studies to monitor changes in range condition.			
Riparian Health/ Disperse Wild Horse Use	If trend conditions remain static or is downward within riparian areas by 2022, exclosure fences may be constructed to promote riparian recovery, or additional management measures, including, adjusting AML, or continued development of off-site water for wild horses could be considered where feasible.			
	Construct new water developments and vegetative treatments that provide increased water and forage availability. Reconstruct existing water developments and maintain vegetation treatments that produce forage to assist in limiting the distance horses trail to and from water sources. Annually maintain water developments following reconstruction. Develop a minimum of two and up to four new water developments to better disperse wild horse use. Prior to construction of any new water developments, the following would be required: <input type="checkbox"/> Acquisition	Construct new water developments and vegetative treatments that provide increased water and forage availability. Reconstruct existing water developments and maintain vegetation treatments that produce forage to assist in limiting the distance horses trail to and from water sources. Annually maintain water developments following reconstruction.	Same as No Action.	Maintain existing water developments until they outlive their useful life then remove them and re-adjust AML based on available water within the Frisco HMA. Haul water during time of drought to provide water in areas with adequate forage.

	<p>of the necessary water rights.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Planning and design of the water developments. <input type="checkbox"/> Completion of a site-specific environmental analysis. <input type="checkbox"/> Completion of a site-specific cultural resource inventory. <input type="checkbox"/> Acquisition of necessary funding. <p>Annually maintain developments following construction and/or reconstruction.</p> <p>Haul water during time of drought to provide water in areas with adequate forage.</p>			
Vegetation, Wildlife, Migratory Birds and Special Status Species Habitat	<p>Short-term displacement due to future gather activities from about 1 to 20 days. Reduced competition for forage and water leading to healthier rangeland vegetation.</p> <p>Short-term displacement during reconstruction of existing water developments and construction of 2-4 new developments. Over long-term, disperses wild horse use more broadly across the Frisco HMA following construction of 2-4 new water developments.</p>	Same as Alternative 2.	Same as No Action.	As existing water developments exceed their useful life and become nonfunctional, use by wild horses would concentrate at the remaining water sources. AML would be further adjusted based on the remaining available water.

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Table 6: Summary Comparison of the Alternatives for Gather and Removals*(Summarize and compare potential impacts)*

Item	Alternative 2 Proposed Action	Alternative 3:	Alternative 4	Alternative 5	Alternative 1: No Action
<u>Impacts to Wild Horses</u> <ul style="list-style-type: none"> • Gather Number • Removal Number • Fertility Control - # Mares • Post-Gather Sex Ratio • Post-Gather Population Size 	<p>Approximately 104 head of wild horses would be removed during the first gather planned to begin in October 2012. Two to four follow-up gathers over the next ten years gathering 100- 200 head of wild horses would be needed to reach the lower AML of 30 head.</p>	<p>Approximately 200 head of wild horses would be gathered and 180 head of horses would be removed.</p>	<p>Approximately 104 head of wild horses would be removed during the first gather planned to begin in October 2012. Two to four follow-up gathers over the next ten years gathering 100- 200 head of wild horses would be needed to reach the lower AML of 30 head.</p>	<p>Approximately 200 head of wild horses would be gathered and 180 head of horses would be removed.</p>	<p>No wild horses would be gathered or removed.</p>
	<p>Approximately 117 head of wild horses would remain on the HMA, which is 87 head above the upper AML. Additional gathers would eventually remove the population down to the lower AML of</p>	<p>Approximately 50 head of wild horses would remain on the HMA, which would be the lower AML.</p>	<p>Approximately 117 head of wild horses would remain on the HMA, which is 87 head above the upper AML. Additional gathers would eventually remove the population down to the lower AML of</p>	<p>Approximately 40 head of wild horses would remain on the HMA, which is 28 head above the lower AML.</p>	<p>The population of wild horses would continue to increase above the 221 horses currently estimated in the HMA area.</p>

	30 head.		30 head.		
	Studs and mares would be selected for release back in to the HMA to maintain a diverse age structure, herd characteristics and body type (conformation).	In breeding population studs and mares would be selected for release back in to the HMA to maintain a diverse age structure, herd characteristics and body type (conformation).	Studs and mares would be selected for release back in to the HMA to maintain a diverse age structure, herd characteristics and body type (conformation).	Studs and mares would be selected for release back in to the HMA to maintain a diverse age structure, herd characteristics and body type (conformation).	No horses would be gathered or released.
	Studs would be selected for release with the objective of establishing a 60% male sex ratio.	Studs and geldings would be selected for release with the objective of establishing a 50% male sex ratio.	Same as Alternative 2	Studs would be selected for release with the objective of establishing a 50% male sex ratio.	No horses would be gathered so sex ratios would not be adjusted.
	Approximately 31 mares would be treated with a two-year Porcine Zona Pellucida (PZP-22) and released back on to the HMA. During additional gathers any mares released would be treated with a two-year Porcine Zona Pellucida (PZP-22) or similar vaccine	Approximately 10 mares would be treated with a two-year Porcine Zona Pellucida (PZP-22) and released back on to the HMA. During additional gathers any mares released would be treated with a two-year Porcine Zona Pellucida (PZP-22) or similar vaccine	Approximately 31 mares would be treated with a two-year Porcine Zona Pellucida (PZP-22) and released back on to the HMA. During additional gathers any mares released would be treated with a two-year Porcine Zona Pellucida (PZP-22) or similar vaccine	Same as No Action.	NO mares would be treated with a two-year Porcine Zona Pellucida (PZP-22) or similar vaccine and released back on to the HMA.
Impacts to Vegetation/Soils and	Short-term displacement due to gather activities from about 1 to 20 days. Reduced competition for forage and water leading to healthier rangeland vegetation, soils and riparian areas.				Increase damage to resources as

Riparian/Wetland Resources	Improvements to vegetation, soils, and riparian areas would not occur for 6 to 10 years or until the wild horse population is within the AML. The removal of some animals would maintain the conditions of the vegetation, soils, and riparian areas.	The higher population (higher AML) would reduce the benefits to vegetation, soils, and riparian areas when compared to Alternative 2 4 and 5. A wild horse population within the new AML would maintain not improve the conditions of the vegetation, soils, and riparian areas.	Same as Alternative 2	If gather objectives are met, improvements to vegetation, soils, and riparian areas from wild horse population being within the AML would begin within a year.	wild horse population continue to exceed carrying capacity of the forage and water resources within the HMA.
Impacts to Migratory Birds, Wildlife and TES	Short-term displacement during gather activities. Over long-term, reduced competition for limited forage and water resources.				Increase in competition for limited forage and water resources.
	Reduced competition for limited forage and water resources would occur slowly over 6 to 10 years or until the wild horse population is within the AML.	The higher population (higher AML) would increase competition for limited forage and water resources when compared to Alternative 2 and 5. In the Short-term competition for limited forage and water resources would be reduced quicker than Alternatives 2 and 4.	Same as Alternative 2	If gather objectives are met, competition for limited forage and water resources would be reduced immediately after the gather.	

2.3 Alternatives Considered But Eliminated From Further Analysis

2.3.1 HMAP

Provide Supplemental Feed and Water

Providing supplemental feed (hay) or hauling water (other than during a short-term emergency situation) does not meet the definition of minimum feasible management and is inconsistent with current law, regulation and policy. Refer to 43 CFR 4710.4.

Manage the Entire Population as a Non-Breeding Population of Geldings

One possible management alternative which has been suggested is to manage the Frisco HMA in its entirety as a non-breeding population of geldings. This alternative could require a land use plan amendment or other possible regulatory changes. Therefore, it was not analyzed in detail at this time.

Return the HMA to Herd Area Status with Zero AML

Another alternative which has been suggested is to return the Frisco HMA to Herd Area status and establish the AML as “0” animals. This suggestion is made because the limited naturally occurring (undeveloped) water available to the Frisco HMA wild horse population is not adequate to maintain the population in a thriving natural ecological balance and multiple use relationship without the need for continued supplementation during drought. With reconstruction of the existing water developments the available water is expected to be adequate to support a population of 30-60 animals and possibly more. Therefore this alternative was not considered in detail.

2.3.2 Gather and Removals

Remove or Reduce Livestock within the HMA

This alternative would involve no removal of wild horses and instead address the excess wild horse numbers through the removal or reduction of livestock within the HMA. This alternative was not brought forward for detailed analysis because it is outside of the scope of the analysis, and is inconsistent with the Pinyon MFP, and the WFRHBA which directs the Secretary to immediately remove excess wild horses, and is inconsistent with multiple use management. Livestock grazing can only be reduced or eliminated following the process outlined in the regulations found at 43 CFR Part 4100 and would require an amendment to the Pinyon MFP. Such changes to livestock grazing cannot be made through a wild horse gather decision.

Livestock permit renewals were completed from 2007 – 2012 on the allotments within and adjacent to the Frisco HMA. Each of these renewals had Environmental Assessments and Decision Records completed. These decisions established stocking rates for livestock. The decisions also established seasons of use, areas of use, kind and class of livestock and management actions to improve livestock distribution. These management actions included the establishment of grazing systems, allowable use levels, salting and herding practices. Some livestock reductions were made in these decisions on allotments within the Frisco HMA. Livestock grazing continues to be evaluated for allotments and use areas within the Frisco HMA. Monitoring and evaluation of livestock grazing is in accordance with the Pinyon MFP’s Rangeland Program Summary Section IV, 17, which states:

“Rangeland studies and monitoring programs will be continued and/or initiated to determine if rangeland management objectives are being achieved and if proposed grazing use levels must be adjusted. This monitoring program will continue on all allotments. Particular attention will be

given those areas where there is high resource conflict or there is the possibility of rapid improvement or deterioration of the rangeland resources. The concentration of rangeland monitoring will be on those allotments in the "I" category.

The monitoring program will evaluate changes in range condition and trend which includes determination of plant vigor, plant character, plant density, plant phenology, ground cover and degree of forage utilization on key species. Four primary studies will be used in this evaluation: (1) actual grazing use, (2) forage utilization, (3) range trend, and (4) climate analysis. In addition, data on wildlife habitat, riparian vegetation, and watershed condition will be collected and used as needed. When results of studies are evaluated and it is determined that the objectives are not being achieved on a specific allotment, modifications could include changes in grazing systems, livestock numbers, season of use, additional rangeland developments, or any combination of these alternatives.”

The BLM is currently authorized to remove livestock from the HMA, “if necessary to provide habitat for wild horses or burros, to implement herd management actions, or to protect wild horses or burros from disease, harassment or injury” under CFR 4710.5. This authority is usually applied in cases of emergency and not for general management of wild horses or burros in a manner that would be inconsistent with the land-use plan and the separate decisions establishing the appropriate levels of livestock grazing and wild horse use, respectively. Available data also indicates that wild horse use – including where livestock use has been excluded – has resulted in excessive vegetative utilization and impacts to rangelands that are recovering from wildfire.

Gather the HMA to the AML Upper Limit

A post-gather population size at the upper level of the AML range would result in the AML being exceeded with the next foaling season. This would be unacceptable for several reasons.

The AML represents “that ‘optimum number’ of wild horses which results in a thriving natural ecological balance and avoids a deterioration of the range” (Animal Protection Institute, 109 IBLA 119; 1989). The IBLA has also held that, “Proper range management dictates removal of horses before the herd size causes damage to the rangeland. Thus, the optimum number of horses is somewhere below the number that would cause resource damage” (Animal Protection Institute, 118 IBLA 63, 75; 1991).

The upper level of the AML established within the HMA represents the maximum population for which thriving natural ecological balance would be maintained. The lower level represents the number of animals to remain in the HMA following a wild horse gather, in order to allow for a periodic gather cycle, and to prevent the population from exceeding the established AML between gathers.

Additionally, gathering to the upper range of AML, would result in the need to follow up with another gather within one year (with resulting stress on the wild horse population), and could result in overutilization of vegetation resources and damage to the rangeland if the BLM is unable to gather the excess horses in the HMA on an annual basis. This alternative would not reduce the wild horse population growth rate of 20-25% in the Frisco HMA and the BLM would not be able to conduct periodic gathers and still maintain a thriving natural ecological balance. For these reasons, this alternative did not receive further consideration in this document.

Fertility Control Treatment Only (No Removal)

Population modeling was completed to analyze the potential impacts associated with conducting gathers about every 2-3 years over the next 20 year period to treat captured mares with fertility control. Under this alternative, no excess wild horses would be removed. While the average population growth would be reduced to about (11) % per year, AML would not be achieved and the damage to the range associated with wild horse overpopulation would continue. This alternative would not meet the Purpose and Need for the Action, and would be contrary to the WFRHBA, and was dismissed from further study.

Bait or Water Trap Only

An alternative considered but eliminated from detailed analysis was use of bait and/or water trapping as the primary gathering method. The use of bait and water trapping, though effective in specific areas and circumstances, would not be timely, cost-effective or practical as the primary gather method for this HMA due to the timing of the proposed gather. However, water or bait trapping may be used to achieve the desired goals of Alternatives 2-5 if gather efficiencies are too low using a helicopter or a helicopter gather cannot be scheduled. This alternative was dismissed from detailed study as a primary gather method for the following reasons: (1) the project area is too large to effectively use this gather method; (2) road access for vehicles to potential trapping locations necessary to get equipment in/out as well as safely transport gathered wild horses is limited; and (3) the presence of scattered water sources on both private, state and public lands inside and outside the HMAs would make it almost impossible to restrict wild horse access to the extent necessary to effectively gather and remove the excess animals through bait and/or water trapping to achieve management goals.

Wild Horse Numbers Controlled by Natural Means

This alternative was eliminated from further consideration because it is contrary to the WFRHBA which requires the BLM to prevent the range from deterioration associated with an overpopulation of wild horses. It is also inconsistent with the Pinyon MFP, which directs that Cedar City Field Office BLM conduct gathers as necessary to achieve and maintain the AML. The alternative of using natural controls to achieve a desirable AML has not been shown to be feasible in the past. Wild horses in the Frisco HMA are not substantially regulated by predators. In addition, wild horses are a long-lived species with documented foal survival rates exceeding 95% and they are not a self-regulating species. This alternative would result in a steady increase in numbers which would continually exceed the carrying capacity of the range until severe and unusual conditions that occur periodically-- such as blizzards or extreme drought-- cause catastrophic mortality of wild horses.

Gather and Release Excess Wild Horses Every Two Years and Apply Two-Year PZP to Horses for Release.

Another alternative to gather a significant portion of the existing population (90%) and implement fertility control treatment only, without removal of excess horses was modeled using a two-year gather/treatment interval over a 10 year period. Based on WinEquus population modeling, this alternative would not result in attainment of AML for the HMA. And the wild horse population would continue to have an average population growth rate of -2% to 7.9% adding to the current wild horse overpopulation, albeit at a slower rate of growth than the No Action Alternative. The modeling reflected an average population size in 11 years of 245 to 474 wild horses under a two year treatment interval. In 90% of the trials this alternative would not decrease the existing overpopulation of wild horses, resource concerns and rangeland deterioration would continue, and implementation would result in significantly increased gather and fertility control costs relative to the alternatives that remove excess wild horses to the AML range. In addition to not achieving AML, the time needed to complete a gather would also increase over time,

because the more frequently an area is gathered, the more difficult wild horses are to trap. They become very evasive and learn to evade the helicopter by taking cover in treed areas and canyons. Wild horses would also move out of the area when they hear a helicopter, thereby further reducing the overall gather efficiency. Frequent gathers would increase the stress to wild horses, as individuals and as entire herds. It would become increasingly more difficult over time to repeat gathers every two years to successfully treat a large portion of the population. For these reasons, this alternative was dropped from detailed study.

Use alternative capture techniques instead of helicopters to capture of excess wild horses

An alternative using capture methods other than helicopters to gather excess wild horses was suggested, other than bait/water trapping, through the public review process. As no specific alternative methods were suggested, the BLM identified chemical immobilization, net gunning, and wrangler/horseback drive trapping as potential methods for gathering horses. Net gunning techniques normally used to capture big games also rely on helicopters. Chemical immobilization is a very specialized technique and strictly regulated. Currently the BLM does not have sufficient expertise to implement either of these methods and they would be impractical to use given the size of the HMA, access limitations and approachability of the horses.

Use of wrangler on horseback drive-trapping to remove excess wild horses can be fairly effective on a small scale; but due to the number of excess horses to be removed, the large geographic size of the HMA, access limitations and approachability of the horses this technique would be ineffective and impractical. Horseback drive-trapping is also very labor intensive and can be very harmful to the domestic horses and the wranglers used to herd the wild horses. For these reasons, this alternative was eliminated from further consideration.

3.0 Affected Environment

This section of the EA briefly discusses the relevant components of the human environment which would be either affected or potentially affected by the Proposed Action or No Action Alternatives. Direct impacts are those that result from the management actions while indirect impacts are those that exist once the management action has occurred.

3.1 General Description of the Affected Environment

The Frisco HMA is approximately 60,367 acres and is located, approximately 15 miles northwest of Milford, Utah (Map 1). Access is provided to the HMA by several dirt roads that originate from Utah State Highway 21. However, the condition of the roads can vary on a daily basis due to weather conditions. Temperatures range from 105°F. in the summer to sub-zero in the winter. Of the 60,367 acres in the HMA approximately 48,852 of these are public land acres, 5,745 of these acres are state and 5,770 acres are private land acres. The wild horses primarily use the lower benches in the winter and the higher elevations in the summer. The HMA is heavily forested with pinyon/juniper trees. The soils within the area are primarily loams. There are considerable amounts of surface rock and scattered rocky outcrops within canyons resulting in wild horses having difficulty traveling long distances and having to take circuitous routes between forage and water.

The HMA ranges from 5,600 in the valleys to 9,500 feet in elevation at the top of Frisco Peak. The wild horses primarily use the lower benches in the winter and the higher elevations in the summer. The HMA supports vegetation types of big sagebrush and pinyon/juniper. The pinyon/juniper vegetation type dominates the HMA and can be dense with minimal under story forage. Open areas outside of the pinyon/juniper canopy are dominated by sagebrush/grasslands. Indian ricegrass, needleandthread grass, and small amounts of curlygrass are the primary forage species. Forage is suffering from drought conditions

of below normal precipitation in 2007, 2008, 2009 and 2012. Spring moisture this year was only 55% of normal which reduced water flows at spring and forage production. Forage conditions have not made sufficient improvement since 2008. Minimal vegetative growth of plants and heavy grazing have already reduced much of the available vegetation. Vegetation near water has been impacted heavily.

The HMA has twelve springs. Five of the springs are developed with the rest undeveloped. Most of these water sources are dry this year. Only three springs have sufficient water to sustain wild horses and wildlife through the summer.

There are an estimated 221 wild horses within the HMA at present with an estimated 40 of these colts. As forage within close proximity of water sources is depleted the wild horses will need to range greater distances for forage. The distance the animals must travel can result in rapid physical deterioration of the animals. In addition, an overlapping dependence of wildlife for the same habitat as the wild horses, necessitates action to reduce competition for limited resources and to preserve physical condition of all animals.

3.2 Description of Affected Resources/Issues

Identification of issues for this assessment was accomplished by considering the resources that could be affected by implementation of one of the alternatives, as well as public involvement and input from the BLM's interdisciplinary team. The public was invited to participate through posting of the proposal on the Utah BLM Environmental Notification Bulletin Board on June 1, 2012. A preliminary Frisco HMA Gather Plan EA was available to the public at the Cedar City Field Office, and on-line at <http://www.ut.blm.gov/> or <https://www.blm.gov/ut/enbb/> for a 30-day review/comment period beginning on August 7, 2012 and ending September 5, 2012. (see section 8.0 Public Involvement).

As required by regulation [43 CFR 4740.1(b)], a public hearing was held in Fillmore, Utah on July 9, 2012 to discuss the use of helicopters and motorized vehicles in managing Utah BLM's wild horses and burros. This specific gather was addressed at that public meeting as well as other gathers that may occur within the state of Utah over approximately the next 12 months. This meeting was advertised in papers and radio stations statewide. The meeting was attended by 1 member of the public who submitted hers and another person's comments at the meeting. In addition the Utah State Office received one comment by e-mail on the "Use of Helicopters, Motorized Vehicles" approximately a week after the public hearing. All the comments submitted from the public were considered during the development of the alternatives within this document. The BLM reviewed its SOPs in response to the views and issues expressed at the hearing and determined that no changes to the SOPs were warranted.

Critical elements of the human environment as identified in BLM Handbook 1790-1, Appendix 5 must be considered. Resources within the project area that may be affected must also be discussed. Those critical elements of the human environment and resources which are not present, or are not affected by the Proposed Action or alternatives, are included as part of the interdisciplinary team checklist (see Appendix 1). Rationale for dismissing specific resources or critical elements is also contained as part of this appendix. These critical elements and resources will not be discussed further.

Those critical elements of the human environment and resources which may be affected by the Proposed Action and/or alternatives are carried forward throughout this analysis, and are discussed briefly as follows.

3.2.1 Rangeland Health/Vegetation

Vegetation production and vigor has been reduced by drought (Standard and Guideline Studies). Drought is defined as prolonged dry weather generally when precipitation is less than 75% of average annual amount (Society for Range Management 1974). Precipitation is the most important single factor determining the type and productivity of vegetation in an area. Forage production increases rapidly as precipitation increases up to about 20 inches per year (Holechek, 1989). Slight reduction from normal precipitation can cause severe reductions in plant yield in areas with less than 12 inches of precipitation (Klages 1942). The valleys within the Frisco HMA average less than 8 inches per year. During the period from 2007-2009 the precipitation was below 75% for that area.

The current drought cycle has had a tremendous influence on rangeland vegetation. As described above, year-long grazing by wild horses has put additional stress on key forage species already affected by drought. Some key forage species have been lost. Recovery could take 5 to 15 years, depending on how severely the drought affected a particular area. Two or more years of drought have far greater impact on vegetation than one year of drought followed by normal or above-normal precipitation.

The Frisco HMA supports multiple vegetation types including: Pinyon-Juniper (PJ), sagebrush, and grasslands (see Table 2 below). The PJ woodland type dominates the HMA and is very dense with minimal understory forage. Open areas outside the PJ canopy are dominated by big sagebrush with Indian ricegrass, wheatgrass, bluegrass, and squirreltail grass as the primary forage species.

Table 2 Vegetation Within the Frisco HMA.

HMA Name	Vegetation Cover	Acres	Percent
FRISCO	Mountain Fir	510	1%
FRISCO	Pinyon-Juniper	52,484	87%
FRISCO	Sagebrush	5,505	9%
FRISCO	Sagebrush/ Perennial grass	1,868	3%
Total		60,367	100%

Monitoring data collected within the Frisco HMA indicated the Utah BLM Standards and Guidelines for Healthy Rangelands were not being fully met and that causal factors for non-attainment of Standard 2 and 3 include dewatering of riparian resource, excessive use by wild horses and elk, the prevalence of invasive species including cheatgrass and halogeton, pinyon and juniper tree encroachment, historic livestock grazing and climatic conditions (drought).

Utilization studies that have been completed during the past 20 years, along with CCFO staff observations, suggest that as wild horse populations increase they contribute to the decrease of forage species. This is especially true in grassland, sagebrush/grassland, and seeded areas.

Seven trend studies were set up within and adjacent to the Frisco HMA by the BLM. These studies describe the soils as being in a stable trend with browse trending slightly down and herbaceous species trending from slightly down to slightly up depending on location within the HMA. These Frequency trend studies suggest the trend is in general stable or static condition. Additional information on the vegetation studies have been summarized in Term Grazing Permit Renewal EAs for the allotments within the HMA.

Year-long grazing by wild horses has been one contributing factor to the downward trend of the grasses and the change from cool season grasses to warm season grasses. Horses, because they are territorial, are

grazing the same areas repeatedly throughout the spring during critical growing periods for grasses. High populations of wild horses can reduce the available forage for not only the year the grasses are grazed, but also for years to come. Horses will graze the most desirable forage plants first before grazing on other species. Wild horses are capable of cropping forage much more closely than wild or domestic ruminants, causing a loss of the most desirable forage species and reducing plant diversity.

From 1998 to 2003 and 2008 to present the excess number of wild horses (numbers over AML) within the HMA reduced the amount of available forage for all grazing animals.

3.2.2 Wetlands/Riparian Zones

Several small wetland/riparian areas are present within the Frisco HMA and consist of streams, seeps, and springs that all occur on BLM lands. There are approximately 0.5 miles of lotic (stream) habitat and a total of approximately 2.6 acres of lentic (spring/seep) areas in the FriscoHMA that have been inventoried. An unknown amount of riparian/wetland that occurs within the Frisco HMA still needs to be inventoried. Common riparian/wetland species are willows, cottonwoods, sedges, rushes, Woods rose, and Kentucky bluegrass. The riparian/wetland areas that have been inventoried since 1995, have approximately 0.9 acres rated in proper functioning condition, 0.23acres rated as functioning at risk with no apparent trend, 0.86 acres functioning at risk with downward trend, and 0.5 miles and 0.67 acres rated as nonfunctional. Riparian habitats represent less than 1 percent of the total acreage of public lands in the Frisco HMA. Reptiles, amphibians, mammals, and bird species routinely use riparian areas for food, water, cover or migration routes. Many neotropical migratory birds are riparian obligates.

Table 5 Lentic Resources for Frisco HMA

Site Name	Year Assessed	Riparian Functional Rating – Acres of Riparian					Total
		PFC	FAR-UP	FAR-NA	FAR-DN	NF	
Bardsley Spring	2006	0.01					0.01
Cattail Spring	2007	0.4					0.4
Diaper Spring	2007					0.03	0.03
Horse Spring	2010				0.01		0.01
West Three Kiln	1995			0.23			0.23
Lower Morehouse Spring	2010	0.26					0.26
Smith Spring	2007	0.17					0.17
West Spring	2007	0.06					0.06
Tub Spring	2007				0.01		0.01

Sawmill Seep 1	2007					0.17	0.17
Sawmill Seep 2	2007					0.06	0.06
Sawmill Seep 3	2007					0.38	0.38
Coyote Spring	2007				0.8		0.8
Douglas Spring	1995					0.03	0.03
Armstrong Spring (0.4 miles outside HMA boundary)	2007				0.04		0.04
Frisco HMA Lentic Total Acres		0.9		0.23	0.86	0.67	1.83
Percent of Total Acres						100%	100%
PFC=Proper Functioning Condition FAR-UP= Functional at risk with upward trend FAR-NA= Functional at risk, trend not apparent FAR-DN= Functional at risk with downward trend NF= Non-functional							

Table 6 Lotic Resources for Frisco HMA

Site Name	Year Assessed	Riparian Functional Rating – Miles of Stream					Total
		PFC	FAR-UP	FAR-NA	FAR-DN	NF	
Sawmill Canyon	2007					0.5	0.5
Frisco HMA Lotic Total Miles						0.5	0.5
Percent of Total Miles						0.5	100%
PFC=Proper Functioning Condition FAR-UP= Functional at risk with upward trend FAR-NA= Functional at risk, trend not apparent FAR-DN= Functional at risk with downward trend NF= Non-functional							

Causal Factors:

The rationale for the less than PFC rating was water development, dewatering, road encroachment, upstream channel conditions, juniper encroachment, rabbitbrush encroachment, recreation, and riparian exclosure maintenance. Livestock, wild horses, and wildlife were also noted as causal factors for portions of the streams not rating at PFC. Wild horses, wildlife, and livestock graze riparian areas due to the presence of water, shade, and succulent vegetation. Riparian areas are vulnerable to the effects of overgrazing due to heavy concentration of wild horses, wildlife, and livestock within these areas. Livestock, wildlife, and wild horse grazing impacts water in many ways. Grazing impacts can alter the chemical, physical and biologic integrity of the water. Grazing impacts also have the ability to modify the

hydrologic response of watersheds by reducing infiltration, reducing vegetative cover, stream channel/floodplain degradation, accelerated erosion processes, surface roughness, and increase compaction. All of these impacts are known to occur, but the impacts cannot be quantified in a predictive manner. Many of the causal factors are within the control of management.

Riparian-wetland areas support a wide variety of avian fauna, mule deer, elk, pronghorn, greater sage grouse, Townsend's big-eared bat and many other small mammals, reptiles, and amphibians. Riparian-wetland resources provide food, shelter, breeding ground, and migration corridors for a variety of wildlife species. Mule deer and elk are attracted to riparian areas due to cooler summer temperatures, valuable forage, water availability, and in treed sites the ability of the communities to provide hiding cover as well as thermal cover in the winter. Lowland riparian areas provide a valuable source of water and succulent forage for pronghorn. Mule deer utilize riparian-wetland areas during fawn rearing because riparian vegetation along springs, streams, meadows, and aspen stands are a source of succulent grasses and forbs; which provide important nutrition during gestation and lactation.



Armstrong Spring

3.2.3 Livestock Grazing

Approximately 8939 sheep AUMs and 12,442 cattle AUMs are permitted on five (5) allotments that have some portion of the allotment within the HMA (see Table 3 below). Using acreage percentages only it is estimated that the portions of allotments within the HMA account for 1238 cattle AUMs and 2,175 sheep AUMs. However, the use by livestock within the HMA boundaries is less than this.

Livestock preference as reflected in existing permits for the allotments that overlap Frisco HMA has remained essentially the same from 1983 to present. For the past ten years actual livestock use with the HMA has been substantially reduced or even eliminated during the years of drought and during years when the wild horse estimated population was above AML. All of the livestock 10-year term permits have been

renewed in the past six years. Adjustments to livestock grazing permits have included seasons-of-use, kind-of-livestock, AUM's, and numbers of livestock, in order to improve or maintain the vegetative condition on the allotments. As livestock grazing permits are evaluated, additional adjustments to the total number of AUM's of specified livestock grazing on each allotment, seasons-of-use, and kind-of-livestock may be made. Detailed information about the authorized livestock use within the HMA is provided in Term Grazing Permit Renewal EAs EA-UT- 040-06-36, DOI-BLM-UT-C010-2011-0034-EA, and EA-UT- 040-06-35 for those allotments.

Allotment	Operator Display Name	Livestock Number	Livestock Kind	Grazing Begin	Period End	%PL	AUMs	% of Allotment Within HMA
Beaver Lake	Pearson, Ralph & Sons	496	cattle	11/01	05/31	100%	3457	31%
		100	cattle	06/01	06/30	100%	99	
Frisco	R. Larson Sheep Company	2640	sheep	10/16	03/31	92%	2683	23%
		1800	sheep	04/01	05/31	92%	664	
		50	cattle	10/16	05/31	100%	376	
Wah Wah Lawson	Wintch & Co., LTD	335	cattle	10/01	10/15	87%	144	11%
		1280	cattle	10/16	02/28	87%	4999	
		1100	cattle	03/01	06/15	87%	3367	
Crystal Peak	Frischknecht Livestock	403	Sheep	11/01	04/30	100%	430	28%
	Mickel Brothers LLC	3700	Sheep	10/14	04/30	91%	4361	
Red Rock	Allred Sheep Company	2465	Sheep	03/01	04/30	81%	801	8%
				TOTAL AUMs			21,381	

During years of drought, the reduction in the amount of available forage and the utilization of forage by wild horses caused most operators to place a substantial portion of their grazing preference in non-use, as approved by the BLM. Reasons for non-use vary with the operator and area, but often include recognition that either there is not sufficient forage for both the present numbers of wild horses and the preference level of livestock grazing, and the economics of the range livestock industry are down.

Although voluntary reductions in cattle AUMs have been taken by permittees, horse numbers have remained at or above the upper AML levels throughout most of the drought years.

Wild horses will drive away livestock and wildlife from watering and feeding areas (Miller, 1981). When these resources become depleted, wildlife and wild horses will move to a new location, while livestock must be removed. Sheep could seasonally adjust diets to accommodate horse grazing (Smith 1986b), which reduces the competition for forage and water between domestic sheep and wild horses. Overlap between horses and cattle have been shown to increase at higher stocking density. Large numbers of any two species (cattle or horses) increase the negative interactions (Smith 1986b).

Livestock in these allotments depend on springs, wells, pipelines and water hauling during the periods they

are on the allotment. Several small springs and seeps are scattered throughout the allotments and HMA. During normal precipitation years these small springs and seep disperse wild horse use throughout the HMA reducing competition between livestock and wild horses. The springs and seeps also allow wild horses to use forage at higher elevations where livestock do not graze. During drought years these small springs and seep dry up and wild horses must move to lower elevations to find water sources. These water sources are the larger springs that have been developed with pipelines and troughs, which are also used by livestock. Wild horses also travel outside of the HMA in search of water sources. This increases competition between wild horses and livestock. The BLM has hauled water onto the HMA for wild horses several times during the past ten years.

Some fences have been damaged by wild horses in their natural movement and in their search for water. Most of these fences were in place before the passage of the Wild and Free Roaming Horse and Burro Act of 1971. These fences inhibit the natural and free roaming nature of the wild horses but are necessary for livestock management.

3.2.4 Wildlife including T & E, BLM Special Status Species and Migratory Birds

Special Status Wildlife Species, Big Game, Upland Game, and Migratory Birds/Raptors

Threatened, Endangered and Candidate Species

No federally listed threatened, endangered or candidate species have been identified within the Frisco HMA and they will not be discussed further in this document.

BLM Sensitive Wildlife Species

BLM's 6840 Manual addresses the management of Special Status Species. Special status species are those species which are proposed for listing, officially listed as threatened or endangered, or are candidates for listing as threatened or endangered under provisions of the Endangered Species Act (ESA); those listed by a state in a category such as threatened or endangered implying potential endangerment or extinction; and, those designated by each BLM State Director as sensitive.

The following list summarizes the Special Status Wildlife Species (excluding species listed under ESA) recognized by management under BLM's 6840 Manual and Instruction Memorandum No. UT2007-078. These species are known to occur or have a high probability of occurrences within the Frisco WHMPA.

Ferruginous Hawk (*Buteo regalis*): The Ferruginous hawk may occur within the Frisco HMA. Primary breeding habitat is pinyon-juniper and secondary breeding habitat is shrubsteppe. Edges of pinyon-juniper woodland, utility structures (transmission poles), cliffs and isolated trees serve to provide nesting as well as perching structures for ferruginous hawk.

Townsend Big-Eared Bat (*Corynorhinus townsendii*): Townsend big-eared bat primary breeding habitat consists of pinyon-juniper woodlands and mountain shrub communities. Small moths and a variety of soft-bodied insects are typical food habits.

Big Game

Mule Deer (*Odocoileus hemionus*): Mule deer habitat in the Frisco HMA has been identified as crucial winter range. During spring, summer and early fall, deer feed primarily on a variety of forbs and grasses, with light use on big sagebrush, black sagebrush and antelope bitterbrush. In fall and winter, deer shift

their diets to shrubs including big sagebrush, black sagebrush, antelope bitterbrush, Gambel oak and curlleaf mountain mahogany.

Rocky Mountain Elk (*Cervus Canadensis*): The Frisco HMA has been identified as yearlong elk habitat. Elk primarily forage on grasses, but also utilize shrubs, trees and forbs.

Pronghorn (*Antilocapra Americana*): Pronghorn typically utilize a variety of vegetation with shrubs being highest in composition followed by forbs and grasses. The Frisco HMA has been identified as yearlong pronghorn habitat.

Upland Game

Chukar (*Alectoris chukar*): Chukar prefers to inhabit open, rocky mountain slopes and forage on seeds from a variety of shrubs, grass and forbs within the Frisco HMA.

Migratory Birds and Raptors

The Migratory Bird Treaty Act (16 U.S.C. §703-712, July 3, 1918, as last amended in 1989) prohibits taking, killing, or possessing migratory birds including nests and eggs. In 2001, Executive Order 13186 was issued to outline responsibilities of federal agencies to protect migratory birds under the Migratory Bird Treaty Act (66 FR 3853-3856). Instruction memorandum 2008-050 provides interim guidance to enhance coordination and communication towards meeting BLM's obligations to the Migratory Bird Treaty Act and Executive Order 13186.

BLM recently entered into a Memorandum of Understanding (BLM- MOU WO-230-2010-04) with USFWS to promote the conservation of migratory birds; specifically, *to strengthen migratory bird conservation by identifying and implementing strategies that promote conservation and avoid or minimize adverse impacts on migratory birds through enhanced collaboration between the Parties, in coordination with state, tribal, and local governments.*

Golden Eagle (*Aquila chrysaetos*)

Golden eagles may occur on the Frisco HMA year round. The SWreGAP Animal Habitat Model has shown known or probable winter habitat. A majority of the WHMPA would be used for foraging.

Special Status Plant Species

Threatened, Endangered and Candidate Species

Three federally listed threatened, endangered or candidate species have been identified to occur within the Frisco HMA.

Frisco Buckwheat (*Eriogonum soredium*): Frisco buckwheat typically grows in sagebrush and juniper communities within limestone outcrops, from 6,600 to 7,300 feet elevation. Densely matted, mound-forming with white or pink flowers and leaves approximately 2-5 mm long.

Frisco Clover (*Trifolium friscanum*): Frisco clover is found within volcanic gravels and limestone in pinyon-juniper woodlands, from 6,900 to 7,300 feet elevation. Flowers are reddish purple, trifoliolate leaves, short petioles.

Ostler Pepperplant (*Lepidium ostleri*): Oster pepperplant is found in crevices of limestone outcrops within pinyon-juniper communities, from 5,800 to 6,800 feet elevation. Petals are white with occasional purple;

leaves are grayish and typically only 3-5 lobes.

Because the Frisco gather is expected to occur outside the threatened, endangered and candidate growing season, impacts are not anticipated and will not be discussed any further.

BLM Sensitive Plant Species

No BLM sensitive plant species have been identified within the Frisco HMA and will not be discussed any further.

3.2.5 Wild Horses and Burros

The last removal of excess wild horses from the Frisco HMA was completed in August of 2006 when 43 horses were gathered and 36 were removed. Following the 2006 gather, three stallions and 4 mares were released back into the HMA. The un-gathered population was estimated at approximately 50 animals.

The current estimated population of wild horses within the HMA is estimated at 221 head. This number is based on an aerial population inventory using direct count from the Mark-Resight method. A statistical analysis is being conducted that will provide a reliable confidence interval that provides the precision of the population estimate, but has not been completed at the time of this document. The population inventory was conducted in April 2012 (BLM Wild Horse Gather and Population Inventory Files).

Rangeland resources and wild horse health have been and are currently being affected within the Frisco HMA, due to drought and overpopulation. Excess wild horses above the AML have reduced available forage, resulting in increased competition for available resources. Wild horses have expanded outside of the HMA in search of forage, water, and cover. The gather and removal of wild horses from the Frisco HMA would have direct and indirect impacts to individual animals and the social structure of bands in the area. Most impacts would be short term (under 1 year), but some would be long term (greater than a year). These impacts will be discussed in this EA.



Heavy Utilization on Key Forage Species 1 mile from State Pond.

The AML for the Frisco HMA was set in the Pinyon Management Framework Plan (PMFP) (1983) which allows for, “the removal of horses as required to maintain horse numbers at or below 1982 inventory levels, but not less than 1971 levels.” The MFP also allocated forage for wild horses, livestock, and wildlife. The BLM CCFO has attempted since the completion of the MFP in 1983 to maintain the wild horse population within the AML on the Frisco HMA. Since 1994 four (4) gathers and removals have been conducted within the HMA in an attempt to keep the horse population within the AML. In 2003, 2004 and 2007 the population was down near the upper end of the AML. Gathers of wild horses within this HMA have proven difficult due to heavy tree cover, terrain, and horse movement. As the population increases, it becomes harder to gather the number of horses needed to reduce the population to within the AML.

Wild horse populations above AML compete for forage, water, and cover allocated to wildlife and livestock. High populations of wild horses impact riparian areas with increased trailing, vegetative use, and trampling. Wild horses will drive away livestock and native ungulates from watering and feeding areas (Miller 1981).

Because horses have a cecal digestive system and can cover longer distances than domestic ruminants, wild horses can remain in good health under forage conditions fatal to domestic ruminants (Holechek 1989). In 1999 through 2004, range conditions within the HMA became so bad that even though livestock use was reduced or eliminated on the BLM allotments and several hundred head of wild horses removed, health of some horses declined to critical conditions. Some horses were lost to starvation and dehydration during those years.

The overriding limiting factor for the carrying capacity of wild horses in the HMA is not the available forage, although this is a concern, but is the supply of reliable water during the summer months. Upland vegetation in proximity to water sources are used heavily by wild horses and wildlife, while vegetation in areas farther from water (i.e., greater than six miles) is used slightly to moderately. Horses have moved outside the HMA to areas north and east of the HMA that has adequate forage, but can only be used in the winter and spring when livestock troughs are turned on or water is hauled to those locations. During drought conditions, as has occurred during 1999-2004 and the last few years, water has been hauled and troughs have been turned on during summer to sustain these horses outside the HMA.

The increased concentration of wild horses at water sources have reduced vegetation and caused soil compaction. Due to the high population of wild horses within the HMA, water hauling may need to occur before the proposed action to sustain the current population of wild horses.



Three Kiln Spring

The AML is not large enough to maintain a good genetic health without introduction of horses from outside the HMA. A handful of horses from the different HMAs have been released into this HMA since the passage of the WFRHBA.

Population modeling was completed for the Frisco HMA using Version 3.2 of the WinEquus population model (Jenkins 2000) to analyze how the alternatives would affect the wild horse population. This modeling analyzed removal of excess wild horses with no fertility control, as compared to removal of excess wild horses with fertility control and sex ratio adjustments for released horses. The No Action (no removal) Alternative was also modeled. One objective of the modeling was to identify whether any of the alternatives “crash” the population or cause extremely low population numbers or growth rates. Minimum population levels and growth rates were found to be within reasonable levels and adverse impacts to the population not likely. Graphic and tabular results are also displayed in detail in Appendix 8.

3.2.6 Public Safety

In recent gathers, members of the public have increasingly traveled to the public lands to observe BLM’s gather operations. Members of the public can inadvertently wander into areas that put them in the path of wild horses that are being herded or handled during the gather operations, creating the potential for injury to the wild horses or burros and to the BLM employees and contractors conducting the gather and/or

handling the horses as well as to the public themselves. Because these horses are wild animals, there is always the potential for injury when individuals get too close or inadvertently get in the way of gather activities.

The helicopter work is done at various heights above the ground, from as little as 10-15 feet (when herding the animals the last short distance to the gather corral) to several hundred feet (when doing a recon of the area). While helicopters are highly maneuverable and the pilots are very skilled in their operation, unknown and unexpected obstacles in their path can impact their ability to react in time to avoid members of the public in their path. These same unknown and unexpected obstacles can impact the wild horses or burros being herded by the helicopter in that they may not be able to react and can be potentially harmed or caused to flee which can lead to injury and additional stress. When the helicopter is working close to the ground, the rotor wash of the helicopter is a safety concern by potentially causing loose vegetation, dirt, and other objects to fly through the air which can strike or land on anyone in close proximity as well as cause decreased vision.

During the herding process, wild horses or burros will try to flee if they perceive that something or someone suddenly blocks or crosses their path. Fleeing horses can go through wire fences, traverse unstable terrain, and go through areas that they normally don't travel in order to get away, all of which can lead them to injure people by striking or trampling them if they are in the animal's path.

Disturbances in and around the gather and holding corral have the potential to injure the government and contractor staff who are trying to sort, move and care for the horses and burros by causing them to be kicked, struck, and possibly trampled by the animals trying to flee. Such disturbances also have the potential for similar harm to the public themselves.

Public observation of the gather activities on public lands will be allowed and would be consistent with BLM IM No. 2010-164 and in compliance with visitation protocols for scheduled and nonscheduled visitation found in Appendix 10.

4.0 Environmental Consequences

4.1 Introduction

This section of the EA documents the potential environmental impacts which would be expected with implementation of the Proposed Action and/or the No Action Alternative. These include the direct impacts (which are caused by the action and occur at the same time and place) and indirect impacts (which are caused by the action and are later in time or farther removed in distance).

4.2 Predicted Effects of Alternatives

The direct and indirect impacts to these resources which would be expected to result with implementation of the Proposed Action, Alternatives 3-5 or No Action Alternatives are discussed in detail below.

4.2.1 Rangeland Health/Vegetation

Impacts of Alternative 1: No Action Alternative -- Continue Existing Management/No Gather and Removal

No HMAP would be completed at this time. The HMA would be managed under the objectives of the Pinyon MFP, and current regulations and policies with no objectives specific to the management of wild horses within the Frisco HMA.

Under the No Action Alternative, wild horses would continue to increase in population size beyond the capacity of the habitat to provide water and forage. Heavy and severe use of vegetation resources by wild horses would continue and increase, resulting in further degradation of plant communities, increased soil erosion, and susceptibility to invasive species. Downward trends in key perennial species would be expected in conjunction with reductions in ecological condition and soil stability. The vegetative functional groups (i.e. grass, shrubs, trees etc.) would be changed as grasses are over utilized during critical growing seasons. Vegetation would also experience reduced production resulting in reduced forage availability to wildlife, livestock, and wild horses. Eventually rangeland health would be reduced below a threshold that would be difficult to recover from.

Impacts of Alternative 2: Proposed Action (Proposed HMAP with gather, removal and treatment)

This Alternative would include identifying key areas to facilitate future utilization and vegetation condition and trend monitoring. A rangeland health assessment would be completed every 10 years; based on the results of this assessment additional site-specific resource management objectives for the key areas could potentially be established. During this assessment, current data will be collected on noxious and invasive weeds.

This alternative includes the reconstruction of existing water developments over the next 1-5 years and maintain them annually thereafter. Reconstruction and maintenance activities would be confined to the existing area of disturbance; short-term disturbance of soil, vegetation, riparian and water resources within the affected area would result. Modifications requiring disturbance outside the existing area of disturbance would require a site-specific cultural resource clearance and additional environmental analysis, as appropriate. If cultural resources are found within the area of potential effect, the proposed project would be relocated or redesigned so there are no negative impacts to those resources.

Over a period of 6 to 10 years competition for forage and water between wild horses, wild life and livestock would be directly reduced. A reduced number of wild horses over this period of time within the Frisco HMA would improve and/or sustain rangeland health and lower utilization levels.

Indirect impacts from gathering to the low-range of the AML include reduced trailing by wild horses (less vegetation trampling/disturbance) as they travel to/from water and forage. Actual forage utilization by wild horses would also be reduced from heavy (61+% of annual year's growth) at the present time to moderate or less (<40-60%) within a 1-3 mile radius of the available water. Over the next 10-20 years, reduced forage utilization would promote vegetation re-growth and provide for natural recovery of overgrazed plants. A reduced demand for forage would help improve the vigor of vegetation, allow for seedling establishment, increase ground cover, and thereby maintain a thriving natural ecological balance. The recovery from this year's drought and the extended drought would be allowed to continue and should show improved vegetative trend of key forage species, if precipitation remains near or above long-term average levels. Long-term rangeland health would continue to be met within and/or improve within the allotments as key forage and riparian areas would receive less use, especially during time of drought when wild horse are hardest on vegetation near water.

Reducing the wild horse population to within the AML would contribute to maintaining sufficient vegetation and litter within HMA to protect soil from erosion, meet plant physiological requirements, facilitate plant reproduction, and reduce potential for spread of noxious weeds.

This alternative would result in periodic gathers to remove excess wild horses from the Frisco HMA to try achieve then maintain the population within AML. For helicopter round ups direct impacts to vegetation would include short-term (1 to 10 days) disturbance of native vegetation immediately in and around temporary trap sites, and holding and handling facilities. For bait trapping the direct impacts to vegetation would be longer (5-365 days) but would still be considered short term. There would be direct impacts to the vegetation immediately in and around temporary trap sites, and holding, sorting and animal handling facilities. Impacts are created by vehicle traffic and hoof action of penned horses can be locally severe in the immediate vicinity of the corrals or holding facilities. Keeping the sites approximately ½ acre in size would minimize the disturbance area. Since most trap sites and holding facilities are re-used during recurring wild horse gather operations, any impacts would remain site specific and isolated in nature. In addition, most trap sites or holding facilities are selected to enable easy access by transportation vehicles and logistical support equipment and would therefore, generally be near or on roads, pullouts, water haul sites or other previously disturbed flat spots. These common practices would minimize the cumulative effects of these impacts.

The use of fertility control on wild horses during gathers would not impact rangeland resources and vegetation directly but would have indirect impacts, if wild horse populations were reduced or maintained within AML for longer periods of time. The lower wild horse populations or the increase in amount of time that populations are within the AML would extend the beneficial impacts describe in this section above.

Alternative 3: HMAP with adjusted AML, gather, remove and treat with release of geldings

Under Alternative 3, would increase the AML with a breeding population (30-60 animals) and a non-breeding population of (20-40 geldings) being managed. The gelding population would be expected to form bachelor bands; this could result in concentrating use around available water, with the potential for increased utilization and trampling of soil, vegetation and riparian resources or alternatively, could result in geldings roaming further to/from water, resulting in decreased utilization of soil, vegetation and riparian resources. Post-treatment monitoring would be conducted to determine actual impacts.

Competition for forage and water between wild horses, wild life and livestock would be directly increased

with additional horses on the HMA when the population is at or near the high AML. The higher population (higher AML) would reduce the benefits to vegetation, soils, and riparian areas when compared to Alternative 2, 4 and 5. A wild horse population within the new AML would maintain not improve the conditions of Rangeland Health, that includes vegetation, soils, and riparian.

Impacts of Alternative 3 objective H and the gather, removal and treatment of released mares with PZP would be similar to those described in Proposed Action.

Alternative 4: No Action on HMAP. Gather and Removal With Fertility control.

No HMAP would be completed at this time. The HMA would be managed under the objectives of the Pinyon MFP, and current regulations and policies with no objectives specific to the management of wild horses within the Frisco HMA.

Over the longer term, existing water developments would be phased out as they outlive their useful life; riparian areas would be fenced to exclude wild horses if needed to maintain or improve riparian condition. This could have short-term direct impacts to soils, vegetation and riparian resources by concentrating wild horse use around remaining water until such time as AML could be adjusted downward. It could also result in continued supplementation of water (increased disturbance from water hauling to soils and vegetation resources) to wild horses during this timeframe.

Impacts of the gather, removal and treatment of released mares with PZP would be similar to those described in Alternative 2 Proposed Action.

Alternative 5: No Action on HMAP. Gather and Removal Without Fertility control.

Under this alternative, fertility control would not be applied and the growth rate (population increase) would be higher than Alternatives 2-4. This would result in more frequent gathers of the Frisco HMA once the AML was achieved than under Alternatives 2-4. Increased gathers means greater short-term disturbance of vegetation and soils in and around temporary trap sites and holding and handling facilities.

Impacts of the gather and removal would be similar to those described in Proposed Action, but there would be not impacts do to released mares being treated with PZP. However, without slowing reproduction, a steady increase in the number of wild horses through natural foaling rates would result in impacts to vegetation. Removal of excess wild horses would be beneficial to vegetative resources but plant communities may not receive as much opportunity to recover as under the Alternative 4.

4.2.2 Livestock Grazing

Impacts of Alternative 1: No Action Alternative -- Continue Existing Management/No Gather and Removal

Livestock would not be displaced or disturbed due to gather operations under the No Action Alternative. However, forage conditions (quality and quantity) would continue to deteriorate on the range. As wild horse numbers increase, livestock grazing within the HMA may have to be further reduced in an effort to slow the deterioration of the range to the greatest extent possible or because rangeland conditions do not support the multiple uses for which the public lands are being managed.

Impacts of Alternative 2: Proposed Action (Proposed HMAP with gather, removal and treatment)

The HMAP would not have any direct impacts to livestock grazing. Objectives that identify improvements to forage and water availability would reduce competition for these resources within the HMA, if they are

accomplished.

Livestock located near gather activities may be temporarily disturbed or displaced by the helicopter and the increased vehicle traffic during the gather operation. This displacement would be temporary and the livestock would move back into the area once gather operations moved. Past experience has shown that gather operations have little impacts on grazing cattle and sheep. No adjustments in permitted livestock use, active AUMs, season of use and/or terms and conditions would occur as a result of the Proposed Action. Direct impacts of the gather activities itself would be minor and short-term.

Indirect impacts to livestock grazing would be an increase in forage availability and quality, reduced competition for water and forage, and improved vegetative resources that would lead to a thriving ecological condition over the course of 6 to 10 years. Water sources that are developed or repaired for use by wild horses would also be of benefit to livestock.

Impacts of Alternative 3: HMAP with adjusted AML, gather, remove and treat with release of geldings

The direct impacts of the gather and removal would be similar to Alternative 2.

In the short-term the indirect impacts to livestock grazing by reducing the current wild horse population to the new AML in this proposal would be an increase in forage availability and quality, reduced competition for water and forage, and improved vegetative resources within in a year. Water sources that are developed or repaired for use by wild horses would also be of benefit to livestock.

Because the HMAP increases the current AML, the long-term impacts to livestock grazing within the HMA may include further reductions in use in an effort to slow the deterioration of the range to the greatest extent possible or because rangeland conditions do not support the multiple uses for which the public lands are being managed. These adjustments in livestock use would have to be evaluated and analyzed in other documents.

Impacts of Alternative 4: No Action on HMAP. Gather and Removal With Fertility control.

Impacts of the gather and removal would be the same as Alternative 2 Proposed Action. The impacts of the no HMAP would be the same as the Alternative 1 No Action.

Impacts of Alternative 5: No Action on HMAP. Gather and Removal Without Fertility control.

Impacts of the gather and removal would be similar to the Proposed Action; however, wild horse populations may increase at a faster rate and exceed the high end of the AML increase competition between livestock and wild horses sooner.

4.2.3 Wetlands/Riparian Zones

Impacts of Alternative 1: No Action Alternative -- Continue Existing Management/No Gather and Removal

The No Action Alternative would not have any direct impacts to riparian/wetland resources. Indirect impacts would result from continued and increased utilization on riparian vegetation as wild horse populations continue to increase. Wild horse population size would continue to increase in excess of the established AML. Riparian areas currently rated at Proper Functioning Condition (PFC), could experience downward trends caused by utilization of riparian vegetation and browse, and trampling by populations of wild horses in excess of AML. Riparian areas rated below PFC (Functional at Risk and Non-Functional) would likely not improve, and downward trends would continue. Wild horses have been identified

through Proper Functioning Condition Assessments as a contributing factor in riparian areas within the Frisco HMA not being in PFC. Standard 2 in the Standards for Rangeland Health which states “*Riparian and wetland areas are in properly functioning condition...*” is not currently being met for riparian areas within the HMA.

Impacts of Alternative 2: Proposed Action (Proposed HMAP with gather, removal and treatment)

The only direct impact to riparian/wetland areas that could result from the Proposed Action would be from possible use of riparian areas for employment of water trapping. Impacts from water trapping would include construction of a temporary trap around a water source that is designed to hold the horses until they can be transported or treated. Also, trampling of riparian vegetation could occur while the horses are in the trap. Helicopter trap sites and temporary holding facilities would not be constructed on riparian resources.

The Proposed Action would indirectly impact riparian wetland zones and water quality due to the decreased utilization by wild horses in these sensitive areas allowing for the possibility of riparian wetland areas to improve through natural processes. With only gathering and removing 100-200 wild horses in each successive gather operation the improvements would occur incrementally as the wild horses are gathered over the next six to ten years until the low end of AML is reached. Under this alternative native plant health, soils and would slowly improve. An opportunity to make progress toward achieving and maintain riparian areas in properly functioning condition would be foregone until reaching the lower end of AML.

Implementing the Proposed Action would slightly decrease current competition for water sources and alleviate pressures exerted on riparian habitat due to wild horses congregating around these sensitive areas. If the breeding mares left on the HMA were treated with PZP birthrates would decrease, thus reducing the population growth for up to 3 years. This would further reduce utilization impacts on wetlands/riparian resources by extending the time the population is reduced. The functionality of riparian resources would improve in condition towards a more properly functioning condition (PFC) with the removal of excess wild horses.

Alternative 3:HMAP with adjusted AML, gather, remove and treat with release of geldings

Alternative 3 would not have any direct impacts to riparian wetland zones or water quality. Trap sites and temporary holding facilities would not be constructed on riparian resources. Any water source development or maintenance would be addressed in additional NEPA documents.

Alternative 3 would indirectly impact riparian wetland zones and water quality due to the decreased current utilization by wild horses in these sensitive areas allowing for the possibility of riparian wetland areas to improve through natural processes. Implementing Alternative 3 would slightly decrease current competition for water sources and alleviate pressures exerted on riparian habitat due to wild horses congregating around these sensitive areas. The use of fertility control that reduces reproduction rates reduce utilization impacts on wetlands/riparian resources by extending the time the population is within AML. The functionality of riparian resources would improve in condition towards a more properly functioning condition (PFC) with the removal of excess wild horses.

Over the long term the increased AML in that includes a population of gelded horses would put more pressure on the riparian areas compared to populations being managed within the current AML. Riparian areas would not be expected to improve with this increased AML, but the current condition would be maintained.

Alternative 4: No Action on HMAP. Gather and Removal With Fertility control.

Alternative 4 would not have any direct impacts to riparian wetland zones or water quality. Trap sites and temporary holding facilities would not be constructed on riparian resources.

Alternative 4 would indirectly impact riparian wetland zones and water quality and would be similar to that described in Alternative 2 Proposed Action.

Alternative 5: No Action on HMAP. Gather and Removal Without Fertility control.

Alternative 5 would not have any direct impacts to riparian wetland zones or water quality. Trap sites and temporary holding facilities would not be constructed on riparian resources.

Alternative 5 would indirectly impact riparian wetland zones and water quality due to the decreased utilization by wild horses in these sensitive areas allowing for the possibility of riparian wetland areas to improve through natural processes. Implementing Alternative 5 would slightly decrease current competition for water sources and temporarily alleviate pressures exerted on riparian habitat due to wild horses congregating around these sensitive areas until wild horse population increases through reproduction to levels above AML. The functionality of riparian resources would improve in condition towards a more properly functioning condition (PFC) with the removal of excess wild horses until wild horse populations returned to levels above AML.

4.2.4 Wildlife

Impacts of Alternative 1: No Action Alternative -- Continue Existing Management/No Gather and Removal

Special Status Wildlife Species

Under the No Action Alternative impacts would continue between BLM special status species and wild horses; such as destruction and degradation of foraging habitat.

Big Game

Under the No Action Alternative, competition between wild horse and big game would continue and likely increase as the horse population increases. Key perennial species vigor and production would be reduced, thus limiting available forage to big game.

Upland Game

Under the No Action Alternative, wild horses would compete with upland game species for habitat that is suitable for nesting and foraging.

Migratory Birds and Raptors

The No Action Alternative would have no direct impact to migratory birds and golden eagles since the gather would not occur. Indirect impacts would be decreased forage and cover, which would cause a loss of habitat for some species of migratory birds.

Impacts of Alternative 2: Proposed Action (Proposed HMAP with gather, removal and treatment)

Competition for available forage between wild horses and wildlife would continue until the AML numbers have been achieved. Activities using helicopters, construction of temporary holding facilities and water trapping locations can have short-term effects on wildlife from noise and human disturbance. Bait or water trapping can be time consuming, however; activities from noise and human disturbance are decreased vs.

helicopter trapping. During the hot summer months, wildlife will become more reliant on available water resources. This could create a avoidance by wildlife until after the gather is completed or until wildlife become accustomed to these structures.

Proposed fertility control treatments over the long-term, would be expected to provide a decrease in the wild horse population and lessen utilization on key forage species. Wildlife and wildlife habitat would be indirectly affected by the Proposed Action as it pertains to resulting improvements in resource health from the removal of wild horses.

Special Status Wildlife Species

Impacts from wild horse grazing would include destruction and degradation of foraging habitat for ferruginous hawk. Destruction of riparian habitat could potentially impact Townsend big-eared bats foraging opportunities. Development of new and/or reconstruction of water provides Townsend big-eared bat potential foraging areas.

Big Game

Direct impacts would consist primarily of disturbance and short-term displacement of big game by the low-flying helicopter, construction of temporary trap/holding facilities and water trapping locations. A reduction of the wild horse population would decrease competition for available forage, cover, space and water between big game and wild horses once the AML has been achieved. Development of new and/or reconstruction of existing water developments would decrease competition for water sources between big game and wild horses.

Protection of riparian areas are important for big game due to cooler summer temperatures, valuable forage, water availability, and provide hiding cover as well as thermal cover in the winter. Mule deer and elk utilize riparian-wetland areas during fawn rearing because riparian vegetation provides a source of succulent grasses and forbs, which provide important nutrition during gestation and lactation. Lowland riparian areas provide a valuable source of water and succulent forage for pronghorn.

Upland Game

Wild horses would compete with upland game species for habitat that is suitable for nesting in upland habitats such as sagebrush and grassland areas.

Migratory Birds and Raptors

Because the proposed gather is not expected to occur during the migratory bird nesting season, typically April 1 – July 30, the gather would likely have a low potential for disturbance to individual nesting birds and no potential for impact to migratory bird populations. Riparian areas provide important habitat requirements for migratory birds. These areas are used as riparian corridors and for breeding and wintering habitat.

The proposed gather is not expected to occur during the golden eagle nesting season, typically January 1 – August 31, the gather would likely have a low potential for disturbance to individual golden eagle nesting birds.

Alternative 3: HMAP with adjusted AML, gather, remove and treat with release of geldings

Wildlife impacts under this alternative would be similar to those identified in the Proposed Action. The increased AML would likely increase competition between big game and wild horses in these important riparian areas and decrease the nesting and hiding cover requirements for migratory birds.

Alternative 4: No Action on HMAP. Gather and Removal With Fertility control.

Wildlife impacts under this alternative would be similar to those identified in the Proposed Action, however, competition for water resources would be expected to continue.

Alternative 5: No Action on HMAP. Gather and Removal Without Fertility control.

Wildlife impacts under this alternative would be similar to those identified in the Proposed Action. However, without slowing the reproduction rate a steady increase of wild horses through natural foaling rates would occur and increase the competition between wild horses and wildlife for available forage, cover and water resources.

4.2.5 Wild Horses

Impacts of Alternative 1: No Action Alternative -- Continue Existing Management/No Gather and Removal

No HMAP would be completed at this time. The HMA would be managed under the objectives of the Pinyon MFP, and current regulations and policies with no objectives specific to the management of wild horses within the Frisco HMA.

If No Action is taken, excess wild horses would not be removed from within or outside the Frisco HMA at this time. The animals would not be subject to the individual direct or indirect impacts as a result of a gather operation in October 2012. Over the short-term, individuals in the herds would be subject to increased stress and possible death as a result of increased competition for water and forage as the wild horse population continues to grow. The number of areas experiencing severe utilization by wild horses would increase over time. This would be expected to result in increasing damage to rangeland resources throughout the HMA. Trampling and trailing damage by wild horses in/around riparian areas and water sources would also be expected to increase, resulting in larger, more extensive areas of bare ground. Competition for the available water and forage between wild horses, domestic livestock, and native wildlife would increase.

Wild horses are a long-lived species with documented survival rates exceeding 92% for all age classes and do not have the ability to self-regulate their population size. Predation and disease have not substantially regulated wild horse population levels within or outside the Frisco HMA. Some mountain lion predation may occur, but does not appear to be substantial. Coyotes are not prone to prey on wild horses unless young or extremely weak. Other predators such as wolf or bear do not exist within the HMA. As a result, there would be a steady increase in wild horse numbers for the foreseeable future, which would continue to exceed the carrying capacity of the range. Individual horses would be at greater risk of death by starvation and lack of water. The population of wild horses would compete for the available water and forage resources, affecting mares and foals most severely. Social stress would increase. Fighting among stud horses would increase as they protect their position at scarce water sources, as well as injuries and death to all age classes of animals.

Significant loss of the wild horses in the HMA due to starvation or lack of water would have obvious consequences to the long-term viability of the herd. Continued decline of rangeland health and irreparable damage to vegetative, soil and riparian resources, would have obvious impacts to the future of the HMA and all other users of the resources, which depend upon them for survival. As a result, the No Action Alternative would not ensure healthy rangelands, would not allow for the management of a healthy, self-sustaining wild horse population, and would not promote a thriving natural ecological balance.

As populations increase beyond the capacity of the available habitat, more bands of horses would leave the boundaries of the HMA in search of forage and water. This alternative would result in increasing numbers of wild horses in areas not designated for their use, would be contrary to the Wild Free-Roaming Horse and Burro Act and would not achieve the stated objectives for wild horse herd management areas, to “prevent the range from deterioration associated with overpopulation,” and “preserve and maintain a thriving natural ecological balance and multiple use relationship in that area.”

Impacts of Alternative 2: Proposed Action (Proposed HMAP with gather, removal and treatment)

The Proposed Action would only decrease the existing overpopulation of wild horses by approximately 100-200 wild horses in each successive gather operation over a period of six to ten years and stallions would be selected for release with the objective of establishing a 60% male ratio within the core breeding population of 30-60 horses on the range. The target population when the objectives of this alternative are reached would result in a total population at approximately mid-range AML or 45 horses. Every 4-5 years 1-3 studs or mares from a different HMA, with similar or desired characteristics of the horses within the Frisco HMA will be released to maintain the genetic health on the HMA. All animals selected to remain in the core breeding population would be selected to maintain a diverse age structure, herd characteristics and body type (conformation). The Proposed Action would not reduce all of the associated impacts to the wild horses and rangeland resources. Over the short-term, individuals in the herd would still be subject to increased stress and possible death as a result of continued competition for water and forage until the project area's population can be reduced to the AML range. Although lessened the areas experiencing heavy and severe utilization levels by wild horses would remain near current levels and impacts to rangeland resources (concentrated trailing, riparian trampling, increased bare ground, etc.) throughout the HMAs would be expected to continue until the project area's population can be reduced to the AML range and concentration of horses can be reduced.

Because it will take several successive gather operations over a period of six to ten years to get the combined area's wild horse population to low end of AML, bands of horses would continue to leave the boundaries of the HMA into areas not designated for their use in search of forage and water and would not achieve the stated objectives for wild horse herd management area, to “prevent the range from deterioration associated with overpopulation”, and “preserve and maintain a thriving natural ecological balance and multiple use relationship in that area”.

Removal of excess wild horses would improve herd health. Decreased competition for forage and water resources would reduce stress and promote healthier animals. This removal of excess animals coupled with anticipated reduced reproduction (population growth rate) as a result of fertility control should result in improved health and condition of mares and foals as the actual population comes into line with the population level that can be sustained with available forage and water resources, and would allow for healthy range conditions (and healthy animals) over the longer-term. Additionally, reduced population growth rates would be expected to extend the time interval between gathers and reduce disturbance to individual animals as well as to the herd social structure over the foreseeable future.

Bringing the wild horse population back to low range AML by achieving the proposed action would reduce damage to the range from the current overpopulation of wild horses and allow vegetation resources to start recovering, without the need for additional gathers in the interim. As a result, there would be fewer disturbances to individual animals and the herd, and a more stable wild horse social structure would be provided.

Impacts to individual animals may occur as a result of handling stress associated with the gathering,

processing, and transportation of animals. The intensity of these impacts varies by individual animal and is indicated by behaviors ranging from nervous agitation to physical distress. Mortality to individual animals from these impacts is infrequent but does occur in 0.5% to 1% of wild horses gathered in a given gather. Other impacts to individual wild horses include separation of members of individual bands of wild horses and removal of animals from the population.

Indirect impacts can occur after the initial stress event, and may include increased social displacement or increased conflict between stallions. These impacts are known to occur intermittently during wild horse gather operations. Traumatic injuries may occur, and typically involve bruises from biting and/or kicking, which do not break the skin.

The gathers would occur frequently making wild horses more difficult to trap. The horses would become very evasive and learn to evade the helicopter by taking cover in treed areas and canyons. Wild horses would also move out of the area when they hear a helicopter, thereby further reducing the overall gather efficiency. Frequent gathers would increase the stress to wild horses, as individuals and as entire herds. It would become increasingly more difficult over time to repeat gathers if the gathers are within two year intervals to successfully treat mares with PZP.

Stallions selected for release would be released to increase the post-gather sex ratio to approximately 60% stallions in the remaining herds. Stallions would be selected to maintain a diverse age structure, herd characteristics and body type (conformation). It is expected that releasing additional stallions to reach the targeted sex ratio of 60% males would result in smaller band sizes, larger bachelor groups, and some increased competition for mares. With more stallions involved in breeding it should result in increased genetic exchange and improvement of genetic health within the herd.

Fertility Control treatments

All mares selected for release would be treated with a two-year Porcine Zona Pellucida (PZP-22) or similar vaccine/fertility control and released back to the range. Immuno-contraceptive (fertility control) treatments would be conducted in accordance with the approved standard operating and post-treatment monitoring procedures (SOPs, Appendix 6). Mares selected for release would be selected to maintain a diverse age structure, herd characteristics and conformation (body type).

Each released mare would receive a single dose of the two-year PZP contraceptive vaccine. When injected, PZP (antigen) causes the mare's immune system to produce antibodies; these antibodies bind to the mare's eggs and effectively block sperm binding and fertilization (Zoo Montana, 2000). PZP is relatively inexpensive, meets BLM requirements for safety to mares and the environment, and can easily be administered in the field. In addition, among mares, PZP contraception appears to be completely reversible. One-time application at the capture site would not affect normal development of a fetus should the mare already be pregnant when vaccinated, hormone health of the mare, or behavioral responses to stallions (Kirkpatrick et al, 1995). The vaccine has also proven to have no apparent effect on pregnancies in progress, the health of offspring, or the behavior of treated mares (Turner et. al, 1997).

The treatment would be controlled, handled, and administered by a trained BLM employee (SOPs, Appendix 6). Mares receiving the vaccine would experience slightly increased stress levels associated with handling while being vaccinated and freeze-marked. Serious injection site reactions associated with fertility control treatments are rare in treated mares. Any direct impacts associated with fertility control, such as swelling or local reactions at the injection site, would be minor in nature and of short duration. Most mares recover quickly once released back to the HMA, and none are expected to have long term

impact from the fertility control injections. Newly captured mares that do not have markings associated with previous fertility control treatments would be marked with new freeze-mark letters for tracking purposes. This information would also be used to determine the number of mares captured that were not previously treated and provide additional insight to gather efficiency.

Ransom et al. (2010) found no differences in how PZP-treated and control mares allocated their time between feeding, resting, travel, maintenance, and social behaviors in three populations of wild horses, which is consistent with Powell's (1999) findings in another population. Likewise, body condition of PZP-treated and control mares did not differ between treatment groups in Ransom et al.'s (2010) study. Turner and Kirkpatrick (2002) found that PZP-treated mares had higher body condition than control mares in another population, presumably because energy expenditure was reduced by the absence of pregnancy and lactation.

In two studies involving a total of four wild horse populations, both Nunez et al. (2009) and Ransom et al. (2010) found that PZP-treated mares were involved in reproductive interactions with stallions more often than control mares, which is not surprising given the evidence that PZP-treated females of other mammal species can regularly demonstrate estrus behavior while contracepted (Shumake and Wilhelm 1995, Heilmann et al. 1998, Curtis et al. 2002). Ransom et al. (2010) found that control mares were herded by stallions more frequently than PZP-treated mares, and Nunez et al. (2009) found that PZP-treated mares exhibited higher infidelity to their band stallion during the non-breeding season than control mares. Madosky et al. (in press) found this infidelity was also evident during the breeding season in the same population that Nunez et al. (2009) studied, resulting in PZP-treated mares changing bands more frequently than control mares. Long-term implications of these changes in social behavior are currently unknown.

Water/Bait Trapping (if used)

Bait and/or water trapping generally requires a long window of time for success. Although the trap would be set in a high probability area for capturing excess wild horses residing within the area and at the most effective time periods, time is required for the horses to acclimate to the trap and/or decide to access the water/bait.

Trapping involves setting up portable panels around an existing water source or in an active wild horse area, or around a pre-set water or bait source. The portable panels would be set up to allow wild horses to go freely in and out of the corral until they have adjusted to it. When the wild horses fully adapt to the corral, it is fitted with a gate system. The acclimatization of the horses creates a low stress trap. During this acclimation period the horses would experience some stress due to the panels being setup and perceived access restriction to the water/bait source.

When actively trapping wild horses, the trap would be checked on a daily basis. Horses would be either removed immediately or fed and watered for up to several days prior to transport to a holding facility. Existing roads would be used to access the trap sites.

Gathering of the excess horses utilizing bait/water trapping could occur at any time of the year and would extend until the target number of animals are removed to relieve concentrated use by horses in the area, reach AML, to implement population control measures, and to remove animals residing outside HMA boundaries. Generally, bait/water trapping is most effective when a specific resource is limited, such as water during the summer months. For example, in some areas, a group of wild horses may congregate at a given watering site during the summer because few perennial water resources are available nearby. Under

those circumstances, water trapping could be a useful means of reducing the number of horses at a given location, which can also relieve the resource pressure caused by too many horses. As the proposed bait and/or water trapping in this area is a low stress approach to gathering of wild horses, such trapping can continue into the foaling season without harming the mares or foals. Conversely, it has been documented that at times water trapping could be stressful to wild horses due to their reluctance related to approaching new, human structures or intrusions. In these situations, wild horses may avoid watering or may travel greater distances in search of other watering sources.

The wild horses that are gathered would be subject to one or more of several outcomes listed below.

Temporary Holding Facilities During Gathers

Wild horses gathered would be transported from the trap sites to a temporary holding corral near the HMA in goose-neck trailers or straight-deck semi-tractor trailers. At the temporary holding corral, the wild horses will be aged and sorted into different pens based on sex. The horses will be provided ample supply of good quality hay and water. Mares and their un-weaned foals will be kept in pens together. All horses identified for retention in the HMA will be penned separately from those animals identified for removal as excess. All mares identified for release will be treated with fertility control vaccine in accordance with the SOPs for Fertility Control Implementation in Appendix 6.

At the temporary holding facility, a veterinarian, when present, will provide recommendations to the BLM regarding care, treatment, and if necessary, euthanasia of the recently captured wild horses. Any animals affected by a chronic or incurable disease, injury, lameness or serious physical defect (such as severe tooth loss or wear, club foot, and other severe congenital abnormalities) would be humanely euthanized using methods acceptable to the American Veterinary Medical Association (AVMA).

Transport, Short Term Holding, and Adoption Preparation

Wild horses removed from the range as excess would be transported to the receiving short-term holding facility in a goose-neck stock trailer or straight-deck semi-tractor trailers. Trucks and trailers used to haul the wild horses will be inspected prior to use to ensure wild horses can be safely transported. Wild horses will be segregated by age and sex when possible and loaded into separate compartments. Mares and their un-weaned foals may be shipped together depending on age and size of foals. Mare and un-weaned foals are not separated for longer than 12 hours. Transportation of recently captured wild horses is limited to a maximum of 8 hours. During transport, potential impacts to individual horses can include stress, as well as slipping, falling, kicking, biting, or being stepped on by another animal. Unless wild horses are in extremely poor condition, it is rare for an animal to die during transport.

Upon arrival, recently captured wild horses are off-loaded by compartment and placed in holding pens where they are fed good quality hay and water. Most wild horses begin to eat and drink immediately and adjust rapidly to their new situation. At the short-term holding facility, a veterinarian provides recommendations to the BLM regarding care, treatment, and if necessary, euthanasia of the recently captured wild horses. Any animals affected by a chronic or incurable disease, injury, lameness or serious physical defect (such as severe tooth loss or wear, club foot, and other severe congenital abnormalities) that was not diagnosed previously at the temporary holding corrals at the gather site would be humanely euthanized using methods acceptable to the AVMA. Wild horses in very thin condition or animals with injuries are sorted and placed in hospital pens, fed separately and/or treated for their injuries. Recently captured wild horses, generally mares, in very thin condition may have difficulty transitioning to feed. A small percentage of animals can die during this transition; however, some of these animals are in such poor condition that it is unlikely they would have survived if left on the range.

After recently captured wild horses have transitioned to their new environment, they are prepared for adoption or sale. Preparation involves freeze-marking the animals with a unique identification number, vaccination against common diseases, castration, and de-worming. During the preparation process, potential impacts to wild horses are similar to those that can occur during transport. Injury or mortality during the preparation process is low, but can occur.

At short-term corral facilities, a minimum of 700 square feet is provided per animal. Mortality at short-term holding facilities averages approximately 5% (GAO-09-77, page 51), and includes animals euthanized due to a pre-existing condition, animals in extremely poor condition, animals that are injured and would not recover, animals which are unable to transition to feed; and animals which die accidentally during sorting, handling, or preparation.

Adoption

Adoption applicants are required to have at least a 400 square foot corral with panels that are at least six feet tall. Applicants are required to provide adequate shelter, feed, and water. The BLM retains title to the horse for one year and the horse and facilities are inspected. After one year, the applicant may take title to the horse at which point the horse becomes the property of the applicant. Adoptions are conducted in accordance with 43 CFR § 5750.

Sale with Limitation

Buyers must fill out an application and be pre-approved before they may buy a wild horse. A sale-eligible wild horse is any animal that is more than 10 years old; or has been offered unsuccessfully for adoption at least 3 times. The application also specifies that all buyers are not to sell to slaughter buyers or anyone who would sell the animals to a commercial processing plant. Sale of wild horses is conducted in accordance with the 1971 WFRHBA and congressional limitations.

Long Term Pastures

Since fiscal year 2008, the BLM has removed over 37,400 excess wild horses from the Western States. Most animals not immediately adopted or sold have been transported to long-term grassland pastures in the Midwest.

Potential impacts to wild horses from transport to adoption, sale or long-term grassland pastures (LTP) are similar to those previously described. One difference is that when shipping wild horses for adoption, sale or LTP, animals may be transported for up to a maximum of 24 hours. Immediately prior to transportation, and after every 24 hours of transportation, animals are offloaded and provided a minimum of 8 hours on-the-ground rest. During the rest period, each animal is provided access to unlimited amounts of clean water and two pounds of good quality hay per 100 pounds of body weight with adequate bunk space to allow all animals to eat at one time. The rest period may be waived in situations where the anticipated travel time exceeds the 24-hour limit but the stress of offloading and reloading is likely to be greater than the stress involved in the additional period of uninterrupted travel.

LTPs are designed to provide excess wild horses with humane, and in some cases, life-long care in a natural setting off the public rangelands. There, wild horses are maintained in grassland pastures large enough to allow free-roaming behavior and with the forage, water, and shelter necessary to sustain them in good condition. As of February 2012, about 31,400 wild horses that are in excess of the current adoption or sale demand (because of age or other factors such as economic recession) are currently located on

private land pastures in Oklahoma, Kansas, and South Dakota. Establishment of LTPs was subject to a separate NEPA and decision-making process. Located in mid or tall grass prairie regions of the United States, these LTPs are highly productive grasslands compared to the more arid western rangelands. These pastures comprise about 256,000 acres (an average of about 10-11 acres per animal).

Mares and sterilized stallions (geldings) are segregated into separate pastures except at one facility where geldings and mares coexist. Although the animals are placed in LTP, they remain available for adoption or sale to qualified individuals; and foals born to pregnant mares in LTP are gathered and weaned when they reach about 8-12 months of age and are also made available for adoption. The LTP contracts specify the care that wild horses must receive to ensure they remain healthy and well-cared for. Handling by humans is minimized to the extent possible although regular on-the-ground observation by the LTP contractor and periodic counts of the wild horses to ascertain their well-being and safety are conducted by BLM personnel and/or veterinarians. A small percentage of the animals may be humanely euthanized if they are in very poor condition due to age or other factors. Although horses residing on LTP facilities live longer, on the average, than wild horses residing on public rangelands, natural mortality of wild horses in LTP averages approximately 8% per year, but can be higher or lower depending on the average age of the horses pastured there (GAO-09-77, Page 52).

Euthanasia and Sale Without Limitation

While euthanasia and sale without limitation has been limited by Congressional appropriations, it is allowed under the WFRHBA. Neither option is available for horses under the Department of the Interior's fiscal year 2012 budgetary appropriations. Although the appropriations restrictions could be lifted in future appropriations bills, it would be contrary to Departmental policy to euthanize or sell without limitations healthy excess wild horses.

Wild Horses Remaining or Released into the HMA following Gather

Under the Proposed Action, the post-gather population of wild horses would be about 40 wild horses, which is the low range of the AML for the Frisco HMA under this alternative. Reducing population size would also ensure that the remaining wild horses are healthy and vigorous, and not at risk of death or suffering from starvation due to insufficient habitat coupled with the effects of frequent drought (lack of forage and water).

The wild horses that are not captured may be temporarily disturbed and move into another area during the gather operations. With the exception of changes to herd demographics, direct population wide impacts have proven, over the last 20 years, to be temporary in nature with most if not all impacts disappearing within hours to several days of when wild horses are released back into the HMA. No observable effects associated with these impacts would be expected within one month of release, except for a heightened awareness of human presence.

As a result of lower density of wild horses across the HMA following the removal of excess horses, competition for resources would be reduced, allowing wild horses to utilize preferred, quality habitat. Confrontations between stallions would also become less frequent, as would fighting among wild horse bands at water sources. Achieving the AML and improving the overall health and fitness of wild horses could also increase foaling and foaling survival rates over the current conditions.

The primary effects to the wild horse population that would be directly related to this proposed gather would be to herd population dynamics, age structure or sex ratio, and subsequently to the growth rates and population size over time.

The remaining wild horses not captured would maintain their social structure and herd demographics (age and sex ratios). No observable effects to the remaining population associated with the gather impacts would be expected except a heightened shyness toward human contact.

Impacts to the rangeland as a result of the current overpopulation of wild horses would be reduced under the two gather and removal alternatives. Fighting among stud horses would decrease since they would protect their position at water sources less frequently; injuries and death to all age classes of animals would also be expected to be reduced as competition for limited forage and water resources is decreased.

Indirect individual impacts are those impacts which occur to individual wild horses after the initial stress event, and may include spontaneous abortions in mares, and increased social displacement and conflict in studs. These impacts, like direct individual impacts, are known to occur intermittently during wild horse gather operations. An example of an indirect individual impact would be the brief skirmish which occurs among older studs following sorting and release into the stud pen, which lasts less than two minutes and ends when one stud retreats. Traumatic injuries usually do not result from these conflicts. These injuries typically involve a bite and/or kicking with bruises which don't break the skin. Like direct individual impacts, the frequency of occurrence of these impacts among a population varies with the individual.

Spontaneous abortion events among pregnant mares following capture is also rare, though poor body condition can increase the incidence of such spontaneous abortions. Given the timing of this gather, spontaneous abortion is not considered to be an issue for the proposed gather.

A few foals may be orphaned during gathers. This may occur due to:

- The mare rejects the foal. This occurs most often with young mothers or very young foals;
- The foal and mother become separated during sorting, and cannot be matched;
- The mare dies or must be humanely euthanized during the gather;
- The foal is ill, weak, or needs immediate special care that requires removal from the mother; or
- The mother does not produce enough milk to support the foal.

Oftentimes, foals are gathered that were already orphans on the range (prior to the gather) because the mother rejected it or died. These foals are usually in poor, unthrifty condition. Orphans encountered during gathers are cared for promptly and rarely die or have to be euthanized. Nearly all foals that would be gathered would be over four months of age and some would be ready for weaning from their mothers. In private industry, domestic horses are normally weaned between four and six months of age.

Gathering the wild horses during the fall/winter reduces risk of heat stress, although this can occur during any gather, especially in older or weaker animals. Adherence to the SOPs as well and techniques used by the gather contractor help minimize the risks of heat stress. Heat stress does not occur often, but if it does, death can result.

Through the capture and sorting process, wild horses are examined for health, injury and other defects. Decisions to humanely euthanize animals in field situations would be made in conformance with BLM policy. The BLM Euthanasia Policy (IM-2009-041) is used as a guide to determine if animals meet the criteria and should be euthanized (refer to SOPs Appendix 6). Animals that are euthanized for non-gather related reasons include those with old injuries (broken hip, leg) that have caused the animal to suffer from

pain or which prevent them from being able to travel or maintain body condition; old animals that have lived a successful life on the range, but now have few teeth remaining, are in poor body condition, or are weak from old age; and wild horses that have congenital (genetic) or serious physical defects such as club foot, or sway back and should not be returned to the range.

Alternative 3: HMAP with adjusted AML, gather, remove and treat with release of geldings

Impacts from this alternative would be similar to the Proposed Action, however no sex ratios would be adjusted (50:50), and fertility control include the release of geldings into the population. AML may be achieved with the population increasing at the same rate as the proposed action, but the upper AML would be increased.

Under Alternative 3, would increase the upper AML with a breeding population (30-60 animals) and a non-breeding population of (20-40 geldings) being managed. The gelding population would be expected to form bachelor bands; this could result in concentrating use around available water, with the potential for increased utilization and trampling of soil, vegetation and riparian resources or alternatively, could result in geldings roaming further to/from water, resulting in decreased utilization of soil, vegetation and riparian resources.

Stallions selected for gelding would be between 6 months and 20 years of age and have a body condition score of 3 or above. No animals which appear to be distressed injured or in failing health or condition will be selected for gelding. Stallions will not be gelded within 36 hours of capture and no animals that were roped during capture will be gelded at the temporary holding corrals for release. The surgery would be performed at either the gather's temporary holding facility or at a BLM-managed holding center by a licensed veterinarian using appropriate anesthetic agents and surgical techniques (see Gelding SOPs in Appendix 7). The final determination of which specific animals will be gelded will be based on the professional opinion of the attending veterinarian in consultation with the Authorized Officer.

When gelding procedures are done in the field, geldings would be released near a water source, when possible, approximately 24 to 48 hours following surgery. When the procedures are performed at a BLM-managed facility, selected stallions would be shipped to the facility, gelded, held in a separate pen to minimize risk for disease, and returned to the range within 30 to 60 days. Gelding complications (eviscerations, anesthetic reaction, injuries during handling, etc.) that result in euthanasia or mortality during and following surgery of this type is rare and would be expected to be less than five percent of the animals treated.

Gelded animals would be monitored periodically for complications for approximately 7-10 days post-surgery. This monitoring will be completed either through aerial recon if available or field observations from major roads and trails. It is not anticipated that all the geldings will be observed but the goal is to detect complications if they are occurring and determine if the horses are freely moving about the HMA. Gelded animals would be freeze marked with an identifying marker high on their hip to minimize the potential for future recapture and to facilitate post-treatment and routine field monitoring. Once released, anecdotal information indicates geldings would be expected to form bachelor bands. Post-gather monitoring would be used to document whether or not geldings form bachelor bands as expected or intermix with the breeding population. Other periodic observations of the long term outcomes of gelding would be recorded during routine resource monitoring work. Such observations would include but not limited to band size, social interactions with other geldings and harem bands, distribution within their habitat, forage utilization and activities around key water sources. Periodic population inventories and future gather statistics would assist BLM to determine if managing a portion of the herd as non-breeding

animals is effective in slowing the annual population growth rate and extending the gather cycle.

Competition for forage and water between wild horses, wild life and livestock would be directly increased with additional horses on the HMA when the population is at or near the high AML. However, when the population is at or near the lower AML, competition will be reduced for a longer period of time.

Alternative 4: No Action on HMAP. Gather and Removal With Fertility control.

No HMAP would be completed at this time. The HMA would be managed under the objectives of the Pinyon MFP, and current regulations and policies with no objectives specific to the management of wild horses within the Frisco HMA.

Impacts of the gather, removal and treatment of released mares with PZP would be similar to those described in Alternative 2 Proposed Action.

Alternative 5: No Action on HMAP. Gather and Removal Without Fertility control.

Impacts from this alternative would be similar to the Alternative 2 Proposed Action, however no sex ratios would be adjusted, and fertility control would not be applied. AML may be achieved but would exceed the high end of AML sooner than the proposed action.

4.2.6 Public Health and Safety

Impacts of Alternative 1: No Action Alternative -- Continue Existing Management/No Gather and Removal

There would be no gather related safety concerns for BLM employees, contractors and the general public as no gather activities would occur.

Impacts of Alternative 2-5

Public safety as well as that of the BLM and contractor staff is always a concern during the gather operations and would be addressed through Observation Protocols that have been used in recent gathers to ensure that the public remains at a safe distance and does not get in the way of gather operations. Appropriate BLM staffing (public affair specialists and law enforcement officers) will be present to assure compliance with visitation protocols at the site. These measures minimize the risks to the health and safety of the public, BLM staff and contractors, and to the wild horses themselves during the gather operations.

4.3 Cumulative Effects for All Alternatives

The NEPA regulations define cumulative impacts as impacts on the environment that result from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such actions (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. The cumulative impacts study area (CSA) for the purposes of evaluating cumulative impacts is the Frisco HMA.

Past and Present Actions

The Past, Present, and Reasonably Foreseeable Future Actions applicable to the assessment area are identified as the following:

Table 1. Cumulative Impact Analysis

Project --Name/Description	Status		
	Past	Present	Future
Wild Free-Roaming Horse and Burro Act of 1971	X		
Wild Horse and Burro issues, issuance of Multiple use decisions AML adjustments and planning	X	X	X
Frisco HMA Gather and Removals	X	X	X
Historic Livestock Grazing (1870 to 1934)	X		
Taylor Grazing Act (1934)	X		
Livestock Grazing Permit Renewals and authorizations (Beaver Lake, Crystal Peak, Frisco, Red Rock, and Wah Wah Lawson Allotments.)	X	X	X
Wildlife Management	X	X	X
Vegetation Manipulation (Manipulation of vegetation from one type (P/J) to another (shrub/grassland) through the use of machines, hand cutting, planting, burning, and other approved methods.)	X	X	X
Wildfires/Wildfire Suppression and Rehabilitation	X	X	X
Recreation	X	X	X
Energy Development (Powerlines, Pipelines, Wind Energy, etc.)	X		X
Range Improvements (Water developments, fences, seedings, etc.)	X	X	X
Land Use Plans (Pinyon Management Framework Plan and Future Land Use Plans)	X	X	X

Any future proposed projects within the Frisco HMA would be analyzed in an appropriate environmental document following site specific planning. Future project planning would also include public involvement.

Past actions include establishment of wild horse Herd Management Areas, wild horse territories, establishment of AML for wild horses, wild horse gathers, Energy Development, livestock grazing and recreational activities throughout the area. Some of these activities have increased infestations of invasive plants, noxious weeds, and pests and their associated treatments.

4.3.1 Rangeland Health/Vegetation/Livestock Grazing

Livestock grazing in the region has evolved and changed considerably since it began in the 1870s, and is one factor that has created the current environment. At the turn of the century, large herds of livestock grazed on unreserved public domain in uncontrolled open range. Eventually, the range was stocked

beyond its capacity, causing changes in plant, soil and water relationships. Some speculate that the changes were permanent and irreversible, turning plant communities from grass and herbaceous species to brush and trees. Protective vegetative cover was reduced, and more runoff brought erosion, rills and gullies.

In response to these problems, livestock grazing reform began in 1934 with the passage of the Taylor Grazing Act. Subsequent laws, regulations, and policy changes have resulted in adjustments in livestock numbers, season-of-use changes, and other management changes. Given the past experiences with livestock impacts on resources on Public Lands, as well as the cumulative impacts that could occur on the larger ecosystem from grazing on various public and private lands in the region, management of livestock grazing is an important factor in ensuring the protection of Public Land resources.

Past range improvements including fences, ponds, wells etc. have been completed in the allotments. Range improvements are valuable to livestock managers, allowing permittees to control livestock distribution and limiting concentrations.

4.3.2 Wildfires/Vegetative Manipulation

Wildfires are common throughout southern Utah. Wildfire suppression activities and rehabilitation efforts are often associated with the occurrence of wildfires. Manipulation of vegetation from one type (P/J) to another (shrub/grassland) through the use of machines, hand cutting, planting, burning, and other approved methods has occurred throughout the area adjacent to the Frisco HMA. Rehabilitation of areas consumed by wildfires, and vegetative manipulation has occurred in and around the HMA. These activities have had long term beneficial impacts to the vegetative resources in the area. Ground cover and forage species have increased in the areas where these activities have occurred. The increase in forage species have been of benefit to the wild horses, wildlife and livestock that use the area.

4.3.3 Wildlife

PAST

Historic grazing (wild horses and wildlife) has resulted in decreased habitat values for wildlife within the Frisco HMA. In areas where the native understory vegetation has been depleted or vegetation disturbance has occurred cheatgrass has increased and in some locations has become the dominant species. Invasive species such as annual cheatgrass deplete the quality of the habitat to meet wildlife needs.

PRESENT

Direct impacts are expected to be minimal as a result of timing and duration of the Frisco gather. Removal of wild horses would reduce competition between big game and wild horses. Direct competition between wild horses, BLM sensitive species, big game, upland game would continue to occur for perennial grasses, forbs, water and shelter.

Declines in migratory bird populations are becoming well documented through cooperative efforts among conservation groups, federal and state agencies and can be attributed to many factors such as habitat fragmentation (breeding and non-breeding), alteration of vegetative communities, urban expansion, natural disasters and brood parasitism.

4.3.4 Wild Horses

In 1971 Congress passed the WFRHBA which placed wild and free-roaming horses that were not claimed for individual ownership, under the protection of the secretaries of Interior and Agriculture. The act

provided protection, but no appropriation for the management of wild horses. In 1976 the FLPMA gave the BLM the authority to use motorized equipment in the capture of wild free-roaming horses as well as continued authority to inventory the public lands. In 1978, the PRIA was passed which gave the BLM a direction for management as well as approved appropriation authority for management of wild and free-roaming horses on public lands.

In 1971, Herd Areas were identified as areas being occupied by wild horses. Herd Management Areas (HMAs) were established in the 1980s through the Pinyon MFP.

The CCFO has records of nine (5) wild horse gathers and removals that have occurred since 1971 within the Frisco HMA, resulting in the removal of approximately 349 wild horses from area. The average population increase in the Frisco HMA has been between 17-24% a year.

4.3.5 Recreation

Common recreational activities in the HMA include occasional ATV riding, hiking, hunting, wildlife and wild horse viewing. Cumulative impacts are not likely to impact these recreational activities. Improved wildlife habitat as a result of achieving AML in the Frisco HMA may lead to greater opportunity for viewing or hunting wildlife. Wild horse viewing may be reduced due to decreased concentrations of wild horses in areas accessible to the public.

4.4 Reasonably Foreseeable Future Actions (RFFA)

4.4.1 Rangeland Health/Vegetation/Livestock Grazing

Livestock grazing is expected to continue at similar stocking rates, season of use, kind of livestock and utilization objectives as developed in recent permit renewals. Continuing to graze livestock in a manner consistent with grazing permit terms and conditions would be expected to achieve, maintain, and make significant progress towards achieving Land Health Standards.

Production, line-intercept, frequency, and utilization data would continue to be collected for future rangeland management actions. Rangeland Health Assessments for allotments associated with this area would be completed again within the next 10 years.

In the future permit renewals and livestock grazing evaluations would be completed on the Beaver Lake, Crystal Peak, Frisco, Red Rock, and Wah Wah Lawson Allotments on a 10-year cycle. Changes to the permitted livestock use on each of these allotments would be made at that time. Issuance of grazing permits would be completed through appropriate NEPA analysis.

Range improvement projects may be proposed in the future. Water developments and fences aid in distributing livestock. Water developments would provide an additional water source to wild horses. Construction of fences within Frisco HMA could inhibit the free-roaming nature of wild horses. All future range improvement projects would be analyzed through site specific NEPA analysis within a multiple-use concept.

Wildfires and wildfire rehabilitation could impact livestock grazing within the Beaver Lake, Crystal Peak, Frisco, Red Rock, and Wah Wah Lawson Allotments. Forage loss as a result of wildfires may result in temporary reductions in livestock permitted use to allow for recovery of vegetative resources. Wildfire rehabilitation activities may also result in burned areas being closed off to livestock grazing until vegetation conditions meet fire rehabilitation objectives.

4.4.2 Wildlife

Past, present and future project with regards to properly planned vegetation and wildlife habitat improvement, invasive weed treatment, and range improvements are beneficial for wildlife. These projects generally ensure the quality of habitat and forage for wildlife species.

Direct competition between wild horses, big game and other wildlife will continue to occur for perennial grasses, forbs, water and shelter.

Wild horse populations have and would continue to influence the available forage for wildlife. As wild horse populations increase the competition between wildlife and wild horses for limited resources would increase. As wild horses and wildlife are managed within the population goals and appropriate management levels (AML) this competition would be reduced.

Abundance of small bird, mammal and reptile populations can be reduced because of habitat alteration. Wild horses can reduce the vegetation cover required to support adequate prey populations for raptor species.

4.4.3 Wild Horses

In the future, the BLM CCFO would continue to inventory wild horse populations within the established Frisco HMA. Wild horses would continue to be an integral component of public lands, managed within a multiple-use concept within HMAs.

Population data collected during the Proposed Action would enable Wild Horse Specialists to monitor the herds and make management decisions to maintain genetic diversity within the Frisco HMA with historical or desirable herd characteristics, and population demographics. Future removals within the Frisco HMA would utilize this information and provide baseline data for future NEPA analysis.

Over the next 10-15 year period, reasonably foreseeable future actions include gathers about every four years to remove excess wild horses in order to manage population size within the established AML range. Cumulatively over the next 10-15 years, fewer gathers should result and less frequent disturbance to individual wild horses and the herd's social structure would occur. Individual and herd health would be maintained. Population control methods could also be implemented during future gathers. Any future wild horse management would be analyzed in appropriate environmental documents following site-specific planning with public involvement.

Other reasonably foreseeable future actions include the transport, handling, care, and disposition of the excess wild horses removed from the range. Initially wild horses would be transported from the capture/temporary holding corrals to a designated BLM short-term holding corral facility. From there, the animals would be made available for adoption or sale to individuals who can provide a good home, or to long-term holding pastures in the Midwest.

Wildfires and wildfire rehabilitation could impact wild horse habitat within the Frisco HMA. Wild horses may be displaced during wildfires and concentrate in non-burned areas until green-up occurs within the burn at which time it is not uncommon for wild horses, livestock, and wildlife to concentrate in these areas. It is not uncommon to exclude burned areas from grazing until vegetation is allowed to recover. Wild horse management decisions within the Frisco HMA regarding wildfire and wildfire rehabilitation efforts would depend on the extent of habitat loss incurred.

The removal area contains a variety of resources and supports a variety of uses. Any alternative course of wild horse management has the opportunity to affect and be affected by other authorized activities ongoing in and adjacent to the area. Future activities which would be expected to contribute to the cumulative impacts of implementing the Proposed Action include: future wild horse gathers, continuing livestock grazing in the allotments within the area, development of range improvements, continued development of mineral extraction, oil and gas exploration, new or continuing infestations of invasive plants, noxious weeds, and pests and their associated treatments, and continued native wildlife populations and recreational activities historically associated with them. The significance of cumulative effects based on past, present, proposed, and reasonably foreseeable future actions are determined based on context and intensity.

4.5 Summary of Past, Present, and Reasonably Foreseeable Future Actions

Impacts of Alternative 1: No Action Alternative -- Continue Existing Management/No Gather and Removal

Under the No Action Alternative, the wild horse population could exceed 500 head in four years. Increased movement outside the HMA would be expected as greater numbers of horses search for food and water. Heavy to excessive utilization of the available forage would be expected and the water available for use would become increasingly limited. Emergency removals would be expected in order to prevent individual animals from suffering or death as a result of insufficient forage and water. Cumulative impacts would result in foregoing the opportunity to improve rangeland health and to properly manage wild horses in balance with the available forage and water and other multiple uses. Attainment of site-specific vegetation management objectives and Standards for Rangeland Health would not be achieved. AML would not be achieved and the opportunity to collect the scientific data necessary to re-evaluate AML levels, in relationship to rangeland health standards, would be foregone.

Impacts of Alternative 2: Proposed Action (Proposed HMAP with gather, removal and treatment)

Cumulative effects expected when incrementally adding any of the action alternatives to the area of potential effect would include continued improvement of upland vegetation conditions, which would in turn benefit permitted livestock, native wildlife, and wild horse population as forage (habitat) quality and quantity is improved over the current level. Application of fertility control and/or adjustment in sex ratios to favor males should slow population growth and result in fewer gathers and less frequent disturbance to individual wild horses and the herd's social structure. However, return of wild horses back into the HMA could lead to increased difficulty and greater costs to gather horses in the future as released horses learn to evade the helicopter.

Cumulatively, there should be more stable wild horse populations, less competition for limited forage and water resources, healthier rangelands, and wild horses, and fewer multiple use conflicts in the area over the short and long-term. Over the next 10-20 years, continuing to manage wild horses within the established AML range would achieve a thriving natural ecological balance and multiple use relationship on public lands in the area.

Alternative 3:HMAP with adjusted AML, gather, remove and treat with release of geldings

Same as the Proposed Action.

Alternative 4: No Action on HMAP. Gather and Removal With Fertility control.

Same as the Proposed Action.

Alternative 5: No Action on HMAP. Gather and Removal Without Fertility control.

Impacts from this alternative would be similar to the Proposed Action. Not as many horses would be returned to the HMA post gather, no sex ratios would be adjusted, and fertility control would not be applied. AML may be achieved but would exceed the high end sooner than in Alternatives 2-4. This would increase the number of gathers required to maintain the wild horse population within the AML.

5.0 Monitoring and Mitigation Measures

Proven measures to mitigate impacts of the gather on wild horses and on rangeland resources, along with monitoring are incorporated into the Proposed Action through SOPs, which have been developed over time. These SOPs (see Appendices 5 and 6) represent the "best methods" for reducing impacts associated with gathering, handling, and transporting wild horses and for collecting herd data. Hair samples to compare to the genetic baseline for the Frisco HMA wild horses may be collected; additional samples will be collected during future gathers (in 10-15 years) to determine trend. Should monitoring indicate genetic diversity is not being adequately maintained, 2-10 mares and/or studs from HMAs in similar environments would be added every generation (every 8-10 years) to avoid inbreeding depression/maintain acceptable genetic diversity. Ongoing resource monitoring, including climate (weather), and forage utilization, population inventory, and distribution data will continue to be collected.

6.0 List of Preparers

Those responsible for completing this EA are listed as part of the Interdisciplinary Team Record (see Appendix 1).

Chad Hunter (BLM CCFO Rangeland Management/Wild Horse Specialist) – Team Leader, Vegetation, Livestock Grazing, Wild Horses

Sheri Whitfield (BLM CCFO Wildlife Biologist) – Special Status Species (T&E), Wildlife

Adam Stephans (BLM CCFO Rangeland Management Specialist) – Riparian/Wetlands, Livestock Grazing

Jessica Bulloch (BLM CCFO Natural Resource Specialist) – Rangeland Standards and Guidelines, Livestock Grazing, Invasive Species

Craig Egerton (BLM CCFO Natural Resource Specialist) – Rangeland Standards and Guidelines, soils, Forestry, Water resources

Kent Dastrup (BLM CCFO GIS Specialist) – GIS Support, Maps, Tables

7.0 Consultation and Coordination

The Utah State Office initiated public involvement at a public hearing about the use of helicopters and motorized vehicles to capture and transport wild horses (or burros) on July 13, 2012 at the BLM's Fillmore Field Office in Fillmore, Utah. This specific gather was addressed at that public meeting as well as other gathers that may occur within the state of Utah over approximately the next 12 months. This meeting was advertised in papers and radio stations statewide. The meeting was attended by 1 member of the public who submitted hers and another person's comments at the meeting. In addition the Utah State Office received one comment by e-mail on the "Use of Helicopters, Motorized Vehicles" approximately a week after the public hearing. All the comments submitted from the public were considered during the development of the alternatives within this document. The BLM reviewed its SOPs in response to the

views and issues expressed at the hearing and determined that no changes to the SOPs were warranted. However, as most of the comments received are directed more toward the policies and regulations that are used to manage wild horses and burros the comments shared with the National Program Office for Wild Horse and Burros.

Additional public involvement includes the posting of this EA on July 1, 2010 on the Utah BLM ENBB. A preliminary EA was posted on the ENBB, BLM Utah home website and the links to this document was distributed e-mail to interested parties for a 30-day comment period.

7.1 Persons, Groups, & Agencies Consulted

Ronald G. Torgerson
State of Utah School and Institutional Trust Lands Administration (SITLA)

Gus Warr
BLM-USO-Wild Horse and Burro State Lead

Dorena Martineau
Paiute Indian Tribe of Utah –Cultural Resources

8.0 Public Involvement

The Utah State Office initiated public involvement at a public hearing about the use of helicopters and motorized vehicles to capture and transport wild horses (or burros) on July 13, 2012 at the BLM's Fillmore Field Office in Fillmore, Utah. This specific gather was addressed at that public meeting as well as other gathers that may occur within the state of Utah over approximately the next 12 months. This meeting was advertised in papers and radio stations statewide. The meeting was attended by 1 member of the public who submitted hers and another person's comments at the meeting. In addition the Utah State Office received one comment by e-mail on the "Use of Helicopters, Motorized Vehicles" approximately a week after the public hearing. All the comments submitted from the public were considered during the development of the alternatives within this document. The BLM reviewed its SOPs in response to the views and issues expressed at the hearing and determined that no changes to the SOPs were warranted. However, as most of the comments received are directed more toward the policies and regulations that are used to manage wild horses and burros the comments shared with the National Program Office for Wild Horse and Burros.

Additional public involvement includes the posting of this proposed action on the Utah BLM Environmental Bulletin Board (ENBB) June 1, 2012. A preliminary Frisco HMA Gather Plan EA is available to the public at the Cedar City Field Office, and on-line at http://www.blm.gov/ut/st/en/prog/wild_horse_and_burro.html or <https://www.blm.gov/ut/enbb/> for a 30-day review/comment period beginning on August 7, 2012 and ending September 5, 2012. The comments received during this period will be summarized and addressed Appendix 11.

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10.0 Appendices

Appendix 1

INTERDISCIPLINARY TEAM NEPA CHECKLIST

Project Title: Frisco Wild Horse Herd Management Area Plan and Gather /Removal Plan

NEPA Log Number: EA #: DOI-BLM-UT-C010-2012-0018

File/Serial Number:

Project Leader: Chad Hunter

DETERMINATION OF STAFF: *(Choose one of the following abbreviated options for the left column)*

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

PI = present with potential for relevant impact that need to be analyzed in detail in the EA

NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form. The Rationale column may include NI and NP discussions.

RESOURCES AND ISSUES CONSIDERED:

Determination	Resource	Rationale for Determination	Signature	Date
NI	Air Quality	Air quality in the area of the gather is either currently meeting NAAQS or the area is unclassified. Dust or fumes from the gather operations will either quickly settle or be dispersed into the atmosphere. Nothing in the proposal is likely to affect current air quality substantially.	C. Egerton	03/01/12
NP	Areas of Critical Environmental Concern	None within Field Office boundaries.	C. Hunter	03/01/12
NI	Cultural Resources	This gather will have no effect to significant cultural resources. The corral location will be located on an area of existing disturbance, such as road or a wash. The possibility of finding intact cultural resources in these areas is minimal to non-existent. If an existing disturbed area cannot be located for the corral area, a cultural resource inventory will take place prior to the gather. If cultural resources are located during this inventory, the corral area will be moved to another location, which does not contain cultural resources.	N. Thomas	2/15/12
NI	Greenhouse Gas Emissions	The project proposal involves burning fossil carbon based fuels access to set up traps, herd horses, haul horses, etc., and thus involves the release of greenhouse gases (ghgs). Ongoing research has identified the potential effects of ghg emissions (including CO ₂ , methane, nitrous oxide, water vapor and several trace gases) on global climate. The release of these gases during gather activities is cumulative with other local, regional (such as operation of motor vehicles in Southwest Utah) and global releases. The lack of scientific tools to predict climate change on local or regional scales limits the ability to quantify potential future impacts as a result of this singular project or cumulatively with other	C. Egerton	03/01/12

Determination	Resource	Rationale for Determination	Signature	Date
		activities within the analysis area with any confidence.		
NI	Environmental Justice	No minority or economically disadvantaged groups would be affected	C. Hunter	03/01/12
NP	Farmlands (Prime or Unique)	There may be public land soils within the gather area that are capable of being prime, unique or important farmlands. However, the fact that they are not supplied with irrigation water precludes them from actually being P, U or I farmlands.	C. Egerton	03/01/12
PI	Fish and Wildlife	The project area contains crucial summer mule deer and yearlong pronghorn and elk habitat. Substantial yearlong chukar habitat is identified in the area.	S. Whitfield	2/16/12
NP	Floodplains	There are no floodplains within the HMA based on a review of a comparison of the HMA map provided and the FEMA floodplain map of Beaver County.	C. Egerton	03/01/12
NI	Fuels/Fire Management	Wild horse populations that are within AML reduce competition on vegetation resources, especially to new seedlings implemented following wildfire or to reduce fire hazard. Populations that are not within AML (no action) may have a negative impact on new seedlings that are established during pro-active vegetation management or following a wildfire. Overutilization of desired grasses/forbs may have an indirect impact on vegetation and provide a competitive advantage to annual grasses, which experience fire regimes on a more frequent basis. The actions proposed would help protect the investment made by partners to implement vegetation projects that benefit a variety of wildlife and resources and would not negatively impact fire and fuels management.	V. Tyler	03/01/12
NI	Geology / Mineral Resources/Energy Production	Given the transient nature of the proposed action, no substantial impact to ongoing mineral resources exploration or development activities within the project area are foreseen.	Ed Ginouves	2/15/2012
NI	Hydrologic Conditions	Hydrologic conditions in the project area are generally good. There are localized areas of soil compaction within the HMA where the causal factor is wild horse and livestock trailing. The gather would help to reduce those impacts due to fewer horses, but the change would likely not be measurable since some level of wild horses and livestock would continue to use those trails. The No Action alternative would be least likely to affect compaction levels as opposed to most likely alternative to affect compaction, which would be the alternative that removed the most horses.	C. Egerton	03/01/12
NI	Invasive Species/Noxious Weeds	As long as there is a stipulation (as in the SOPs) of the use of weed free hay during any bait trapping, and for any feeding purposes of wild horses and/or domestic horses at the gather site or at holding areas on public land.	J. Bulloch	2/15/2012
NI	Lands/Access	Any pending or authorized lands and realty actions in the wild horse gather area would not be substantially affected by the proposed action.	B. Johnson	03/01/12

Determination	Resource	Rationale for Determination	Signature	Date
PI	Livestock Grazing	Livestock and wild horses compete directly for vegetative, water, and cover resources. Higher populations of wild horses mean more competition with livestock. Wild horse populations that are within AML reduce competition. When wild horse populations are above AML the livestock numbers must be reduced to not over utilize the vegetative and water resources	C. Hunter	03/01/12
NI	Migratory Birds	The migratory bird and nesting raptor season typically is between April 1 – July 30. The gather is anticipated to occur in October which should not have any impacts on nesting birds.	S. Whitfield	02/16/12
NI	Native American Religious Concerns	In accordance with the Memorandum of Understanding between the Paiute Tribe of Utah and the BLM, this project does not require formal consultation.	N. Thomas	3/5/12
NI	Paleontology	The minor surface disturbing activities associated with the proposed action do not pose any substantial impact to any paleontological resources that may be present in the proposed project area.	Ed Ginouves	2/15/2012
PI	Rangeland Health Standards	This is addressed as part of the rangeland health/vegetation section of the ea and in other resource sections such as riparian.	C. Hunter	03/01/12
NI	Recreation	Recreation in the project area is dispersed, and some displacement may occur during gather operations, however impacts will not be substantial. Coordination is necessary with the Utah Division of Wildlife Resources to notify public of operations, and to avoid conflicts during hunting season.	D. Jacobson	03/01/12
NI	Socio-Economics	The proposed action will not in its self, change the socio-economics of the area.	C. Hunter	03/01/12
NI	Soils	See hydrologic conditions	C. Egerton	03/01/12
NI	Special Status Plant Species	There are 3 candidate plant species (<i>Eriogonum spathulatum</i> var. <i>kayeae</i> , <i>Lepidium ostleri</i> , <i>Trifolium friscanum</i>) occur within the project area. The gather is anticipated to occur in October which should not have impacts on the candidate plant species. No BLM sensitive plant species have been identified to occur within the project area.	S. Whitfield	02/16/12
PI	Special Status Animal Species	Golden eagle, ferruginous hawk, Townsend big-eared bat, are identified to occur within the project area.	S. Whitfield	02/16/12
NI	Wastes (hazardous or solid)	There would not be any anticipated issues in regards to wastes with the proposal. All State and Federal regulations would apply to any storage, dispensing or disposing of either solid or hazardous wastes. No significant issues are identified within the proposal.	R. Peterson	03/01/12
NI	Water Resources/Quality (drinking/surface/ground)	The HMA does not feed into to any impaired waters on the state's 303(d) list and there are no particular water quality concerns within the HMA. Removal of individual animals may have some local impact on water quality at isolated	C. Egerton	03/01/12

Determination	Resource	Rationale for Determination	Signature	Date
		springs as a result of less animals using them (eg. lower spikes in E. coli counts, but because wild horses, elk, livestock, etc. would remain within the HMA, any localized water quality issues would remain. In general, alternatives such as Alternative 2, which may include management plans and fencing riparian areas, would be more beneficial to water quality, while No Action would be least likely to improve water quality.		
PI	Wetlands/Riparian Zones	SOPs for the gather would have limited to no impacts on riparian wetland zones. Long term impacts of management and population control of wild horse herds would improve overall functionality of riparian/wetland areas in the Frisco HMA.	A. Stephens	03/05/12
NP	Wild and Scenic Rivers	None within Field Office boundaries.	A. Stephens	03/05/12
NP	Wilderness/WSA	The proposed project area contains no wilderness study areas, or designated wilderness.	D. Jacobson	03/01/12
NI	Woodland / Forestry	There is a woodland resource within the HMA, however nothing in the proposal would impact the overall resource.	C. Egerton	03/01/12
PI	Vegetation	The proposed management and removal of excess wild horses will benefit vegetative communities.	C. Hunter	03/01/12
NI	Visual Resources	The proposed action includes only minor temporary disturbance. The actions will not measurable impact visual resources.	D. Jacobson	03/01/12
PI	Wild Horses and Burros	See proposed action and EA	C. Hunter	03/01/12
NI	Areas with Wilderness Characteristics / Designated Wild Lands	Placement of gather sites in previously disturbed areas, and along existing roads would ensure no impacts to areas which may have wilderness characteristics.	D. Jacobson	03/01/12

FINAL REVIEW:

Reviewer Title	Signature	Date	Comments
Environmental Coordinator			
Authorized Officer			

Appendix 2.

Fundamentals of Rangeland Health

The Fundamentals of Rangeland Health stated in 43 CFR 4180 are:

1. Watersheds are in, or are making significant progress toward, properly functioning physical condition, including their upland, riparian-wetland, and aquatic components; soil and plant conditions support infiltration, soil moisture storage and the release of water that are in balance with climate and landform and maintain or improve water quality, water quantity and the timing and duration of flow.
2. Ecological processes, including the hydrologic cycle, nutrient cycle and energy flow, are maintained, or there is significant progress toward their attainment, in order to support healthy biotic populations and communities.
3. Water quality complies with State water quality standards and achieves, or is making significant progress toward achieving, established Bureau of Land Management objectives such as meeting wildlife needs.
4. Habitats are, or are making significant progress toward being, restored or maintained for Federal threatened and endangered species, Federal Proposed, Category 1 and 2 Federal candidate and other special status species.

The fundamentals of rangeland health combine the basic precepts of physical function and biological health with elements of law relating to water quality, and plant and animal populations and communities. They provide direction in the development and implementation of the standards for rangeland health.

Appendix 3. **Utah Standards for Rangeland Health (1997)**

Standard 1. Upland soils exhibit permeability and infiltration rates that sustain or improve site productivity, considering the soil type, climate, and landform.

As indicated by:

- a) Sufficient cover and litter to protect the soil surface from excessive water and wind erosion, promote infiltration, detain surface flow, and retard soil moisture loss by evaporation.
- b) The absence of indicators of excessive erosion such as rills, soil pedestals, and actively eroding gullies.
- c) The appropriate amount, type, and distribution of vegetation reflecting the presence of (1) the Desired Plant Community [DPC], where identified in a land use plan, or (2) where the DPC is not identified, a community that equally sustains the desired level of productivity and properly functioning ecological conditions.

Standard 2. Riparian and wetland areas are in properly functioning condition. Stream channel morphology and functions are appropriate to soil type, climate and landform.

As indicated by:

- a) Streambank vegetation consisting of, or showing a trend toward, species with root masses capable of withstanding high streamflow events. Vegetative cover adequate to protect stream banks and dissipate streamflow energy associated with high-water flows, protect against accelerated erosion, capture sediment, and provide for groundwater recharge.
- b) Vegetation reflecting: Desired Plant Community, maintenance of riparian and wetland soil moisture characteristics, diverse age structure and composition, high vigor, large woody debris when site potential allows, and providing food, cover and other habitat needs for dependent animal species.
- c) Revegetating point bars; lateral stream movement associated with natural sinuosity; channel width, depth, pool frequency and roughness appropriate to landscape position.
- d) Active floodplain.

Standard 3. Desired species, including native, threatened, endangered, and special-status species, are maintained at a level appropriate for the site and species involved.

As indicated by:

- a) Frequency, diversity, density, age classes, and productivity of desired native species necessary to ensure reproductive capability and survival.
- b) Habitats connected at a level to enhance species survival.

- c) Native species reoccupy habitat niches and voids caused by disturbances unless management objectives call for introduction or maintenance of nonnative species.
- d) Appropriate amount, type, and distribution of vegetation reflecting the presence of (1) the Desired Plant Community [DPC], where identified in a land use plan conforming to these Standards, or (2) where the DPC is identified a community that equally sustains the desired level of productivity and properly functioning ecological processes.

Standard 4. BLM will apply and comply with water quality standards established by the State of Utah (R.317-2) and the Federal Clean Water and Safe Drinking Water Acts. Activities on BLM Lands will support the designated beneficial uses described in the Utah Water Quality Standards (R.317-2) for surface and groundwater. ¹

As indicated by:

- a) Measurement of nutrient loads, total dissolved solids, chemical constituents, fecal coliform, water temperature and other water quality parameters.
- b) Macro-invertebrate communities that indicate water quality meets aquatic objectives.

¹ BLM will continue to coordinate monitoring water quality activities with other Federal, state and technical agencies.

Appendix 4.
Utah Guidelines for Grazing Management (1997)

1. Grazing management practices will be implemented that:

- (a) Maintain sufficient residual vegetation and litter on both upland and riparian sites to protect the soil from wind and water erosion and support ecological functions;
- (b) Promote attainment or maintenance of proper functioning condition riparian/wetland areas, appropriate stream channel morphology, desired soil permeability and infiltration, and appropriate soil conditions and kinds and amounts of plants and animals to support the hydrologic cycle, nutrient cycle and energy flow;
- (c) Meet the physiological requirements of desired plants and facilitate reproduction and maintenance of desired plants to the extent natural conditions allow;
- (d) Maintain viable and diverse populations of plants and animals appropriate for the site;
- (e) Provide or improve, within the limits of site potentials, habitat for Threatened or Endangered Species;
- (f) Avoid grazing management conflicts with other species that have the potential of becoming protected or special status species;
- (g) Encourage innovation, experimentation and the ultimate development of alternatives to improve rangeland management practices;
- (h) Give priority to rangeland improvement projects and land treatments that offer the best opportunity for achieving the Standards.

2. Any spring or seep developments will be designed and constructed to protect ecological process and functions and improve livestock, wild horse and wildlife distribution.

3. New rangeland projects for grazing will be constructed in a manner consistent with the Standards. Considering economic circumstances and site limitations, existing rangeland projects and facilities that conflict with the achievement or maintenance of the Standards will be relocated and/or modified.

4. Livestock salt blocks and other nutritional supplements will be located away from riparian/wetland areas or other permanently located, or other natural water sources. It is recommended that the locations of these supplements be moved every year.

5. The use and perpetuation of native species will be emphasized. However, when restoring or rehabilitating disturbed or degraded rangelands non-intrusive, non-native plant species are appropriate for use where native species (a) are not available, (b) are not economically feasible, cannot achieve ecological objectives

as well as nonnative species, and/or (d) cannot compete with already established native species.

6. When rangeland manipulations are necessary, the best management practices, including biological processes, fire and intensive grazing, will be utilized prior to the use of chemical or mechanical manipulations.
7. When establishing grazing practices and rangeland improvements, the quality of the outdoor recreation experience is to be considered. Aesthetic and scenic values, water, campsites and opportunities for solitude are among those considerations.
8. Feeding of hay and other harvested forage (which does not refer to miscellaneous salt, protein and other supplements) for the purpose of substituting for inadequate natural forage will not be conducted on BLM lands other than in (a) emergency situations where no other resource exists and animal survival is in jeopardy, or (b) situations where the Authorized Officer determines such a practice will assist in meeting a Standard or attaining a management objective.
9. In order to eliminate, minimize or limit the spread of noxious weeds, (a) only hay cubes, hay pellets or certified weed-free hay will be fed on BLM lands, and (b) reasonable adjustments in grazing methods, methods of transport and animal husbandry practices will be applied.
10. To avoid contamination of water sources and inadvertent damage to non-target species, aerial application of pesticides will not be allowed within 100 feet of a riparian/wetland area unless the product is registered for such use by the EPA.
11. On rangelands where a standard is not being met, and conditions are moving toward meeting the standard, grazing may be allowed to continue. On lands where a standard is not being met, conditions are not improving toward meeting the standard or other management objectives, and livestock grazing is deemed responsible, administrative action with regard to livestock will be taken by the Authorized Officer pursuant to CFR 4180.2(c).
12. Where it can be determined that more than one kind of grazing animal is responsible for failure to achieve a Standard, and adjustments in management are required, those adjustments will be made to each kind of animal, based on interagency cooperation as needed, in proportion to their degree of responsibility.
13. Rangelands that have been burned, seeded or otherwise treated to alter vegetative composition will be closed to livestock grazing as follows: (1) burned rangelands, whether by wildfire or prescribed burning, will not be grazed for a minimum of one complete growing season following the burn; and (2) rangelands that have been seeded or otherwise chemically or mechanically treated will not be grazed for a minimum of two complete growing seasons.
14. Conversions in kind of livestock (such as from sheep to cattle) will be analyzed in light of Rangeland Health Standards. Where such conversions are not adverse to achieving a Standard, or they are not in conflict with BLM land use plans, the conversion will be allowed.

Appendix 5.
Standard Operating Procedures for Conducting Wild Horse Gathers

(Methods for Humane Capture of Wild Horses from the Frisco HMA)

(FLPMA – 16 USC 1338a, Wild Horse and Burro Handbook – H-4710-1, 43 CFR 4700)

The gather method employed for this capture operation requires that horses be herded to a trap of portable panels and on extremely rare occasions to ropers who, after roping the animal, will bring it to the trap or have a trailer taken to the roped animal. Gathering would be conducted by using agency personnel or contractors experienced in the humane capture and handling of wild horses. The same rules apply whether a contractor or BLM personnel are used. The following stipulations and procedures will be followed during the contract period to ensure the welfare, safety and humane treatment of the wild horses in accordance with the provisions of 43 CFR 4700.

1. Capture Methods That May Be Used in the Performance of a Helicopter Gather

a. Helicopter Drive Trapping

This capture method will involve driving horses into a pre-constructed trap using a helicopter. The trap is constructed of portable steel panels consisting of round pipe. Wings are constructed off the ends of the panel trap to aid in funneling horses into the trap. The wings are constructed of natural jute, (or similar netting which will not injure a horse), which is hung on either trees or steel T-posts. This sort of wing forms a very effective visual barrier to the horses that they typically will not run through. When the trap is ready for use, a helicopter will start moving horses toward the trap and into the wings.

In heavily wooded areas, it may be necessary to use wranglers in support of the helicopter to move the horses. The helicopter will act more as a spotter for the ground crew in this situation.

The contractor/BLM shall attempt to keep bands intact except where animal health and safety become considerations which would prevent such procedures. The contractor/BLM shall ensure that foals shall not be left behind.

At least one saddle-horse should be immediately available at the trap site to perform roping if necessary. Roping shall be done as determined by the Contracting Officer's Technical Representative (COTR) or Project Inspector (PI). Under no circumstances shall animals be tied down for more than one hour.

Domestic saddle horses may also be used to assist the helicopter pilot (on the ground) during the gather operation, by having the domestic horse act as a pilot (or "Judas") horse on the ground, leading the wild horses into the trap site. Individual ground hazers and individuals on horseback may also be used to assist in the gather.

b. Helicopter Assisted Roping

Capture attempts may be accomplished by utilizing a helicopter to drive animals to ropers. Under no circumstances shall horses or burros be tied down for more than one hour.

Roping shall be performed in such a manner that bands will remain together. Foals shall not be left behind.

2. Other Non-Helicopter Capture Methods

a. Water Trapping

This method involves setting up a trap around a well used water source and employing a self-closing gate with a triggering device or finger gates. Finger gates can be used only with the prior approval and under the supervision of the COTR/PI. Water traps equipped with trip wires would be checked every 10 hours for trapped animals. Water traps may also be manually closed using a pull rope, which requires personal to be at the trap site to close the gate.

It may be necessary to exclude access to other neighboring water sources to encourage use by the target population at the trap site. All enclosures constructed for the purpose of the gather would be flagged and highly visible to the horses, wildlife, and the public. The wires, twine, and flagging would be promptly removed following completion of the trapping.

All water traps and enclosures would be constructed (whenever possible) to accommodate wildlife access points. These points would be where wildlife could get to water by going underneath the panels, such as along trails, washes or low spots.

Placement of portable corral panels would be permitted during foaling season to allow wild horses to become accustomed to them.

b. Bait Trapping

Bait trapping using hay or other enticements may be used as an additional or alternative method of capture. This method would involve setting up a panel trap in an area accessible to the horses and feeding of enticements in the trap over a period of time to habituate the target animal to the bait. Once virtually all horses (or burros) in an area were coming in to the bait, they would be trapped. The principal limitation of this method is that forage must be limited or the bait must be more desirable than the surrounding forage.

c. Net Gunning

The net-gunning aerial capture technique uses weighted nets to individually capture wild animals. Net gun capture is a valuable tool when specific animals are targeted for restraint, relocation or removal. The technique is not applicable when a large number of animals require capture.

When using nets, drug and electrical immobilization are rarely required. Individual animals are located, herded by the pilot as slowly as possible into an open area and then are netted from the helicopter using weighted, soft mesh net. As the horse or burro becomes tangled in the net they become somewhat disoriented and further slow down. Some animals come to a complete standstill when surrounded by the net. Others become tangled to the point where they roll onto the ground.

Immediately after netting an animal the crew members approach the animal. The horse or burro is rolled onto its side, cross-hobbled and blindfolded. A muzzle is used in cases where an animal acts aggressive. The net is then rolled away from the horse or burro and the animal can be handled for collection of biological samples. If transport is required, the hobbled, blindfolded animal is rolled into a soft canvas bag. The bag is laced closed with a strong nylon rope. The rope is attached to a hook on the belly of the helicopter and the animal is transported to the destination. Transport time to small, portable corrals is usually under 10 minutes per animal.

Once at the destination, the horse or burro is gently lowered into the small, portable corral. The ground crew unhooks the transport rope and removes the bag from around the animal. The blindfold and hobbles are removed. The horse or burro immediately gets onto their feet, appearing only slightly disoriented.

d. Chemical Capture

The chemical capture technique has similar benefits to the net gunning technique in the fact that individual animals may be captured. Chemical capture is a valuable tool when specific animals are targeted for restraint, relocation or removal. The technique is not applicable when a large number of animals require capture.

When using chemical capture a drug will be administer through the use of a dart gun and dart. The dart will be loaded with a chemical recommended by a veterinarian and approve by the BLM Authorized Officer on site. The dart is then shot out of a gun using the appropriate propellant for that gun. As the dart impacts the animal the chemical is released and the animal is subdued by the chemical. The use of this method is limited to within 100 yards or the range of the dart gun. The chemical can be administered from the ground or by air.

Once the animal is subdued by the chemical ground crews must imminently approach the animal and hobble or halter the animal. As the chemical wears off and the animal case once again move with normal function saddle horses may be used to move the animal where it can be loaded into a trailer. If the animal is already in a location where it can be loaded then the animal may be tied down for no longer then 1 hour and loaded directly into the trailer.

3. Stipulations for Portable Corral Traps/Exclosures

Capture traps would be constructed in a fashion to minimize the potential for injury to wild horses or burros and BLM/contractor personnel. Gates would be wired open at all unmanned trap sites, and would be left closed only when needed to hold horses or burros inside. Trapped horses or burros would not be held inside the traps for a period exceeding 10 hours, unless provided with feed (weed free hay) and water.

The Utah Division of Wildlife Resources would be notified as soon as possible if any wildlife became injured during capture operations. Wildlife caught inside traps would be released immediately.

4. Contract Helicopter, Pilot and Communications

The contractor must operate in compliance with Federal Aviation Regulations, Part 91. Pilots provided by the contractor shall comply with the Contractor's Federal Aviation Certificates, applicable regulations of the State in which the gather is located.

When refueling, the helicopter shall remain a distance of at least 1,000 feet or more from animals, vehicles (other than fuel truck), and personnel not involved in refueling.

The COTR/PI shall have the means to communicate with the contractor's pilot at all times. If communications cannot be established, the Government will take steps as necessary to protect the welfare of the animals. The necessary frequencies used for this contract will be assigned by the COTR/PI when the radio is used. The contractor shall obtain the necessary FCC licenses for the radio system.

The proper operation, service and maintenance of all contractor furnished helicopters is the responsibility of the contractor. The BLM reserves the right to remove from service pilots and helicopters which, in the opinion of the Contracting Officer or COTR/PI, violate contract and FAA rules, are unsafe or otherwise unsatisfactory. In this event, the contractor will be notified in writing to furnish replacement pilots or helicopters within 48 hours of notification. All such replacements must be approved in advance of operation by the Contracting Officer or his/her representative.

All incidents/accidents occurring during the performance of any delivery order shall be immediately reported to the COTR.

5. Non-Contract Helicopter Operations

An Aircraft Safety Plan and flight hazard analysis will be appropriately approved and filed and copies distributed to the necessary individuals prior to commencing the removal operation. Daily flight plans will also be filed. If a BLM contract helicopter is used, all BLM, Aircraft Safety and Operations standards will be adhered to.

There will be daily briefings with the helicopter pilot, Authorized Officer and all personnel involved in the day's operation. The purpose of this meeting is to discuss in detail all information gathered during the familiarization flight such as hazards, location of horses, potential problems, etc. Discuss any safety hazards anticipated for the coming day's operation or any safety problems observed by the Authorized Officer or anyone else, outline the plan of action, delineate course of actions, specifically position the hazers and their responsibilities, logistics, and timing. After each flight, removal personnel will discuss any problems and suggest solutions. This may be accomplished over the radio or on the ground as the need dictates.

A flight operations plan will be filed with the Cedar City Interagency Dispatch Center. This plan will describe the area to be flown and the expected time frames of flight operations. A weather forecast will be acquired from the dispatcher. There will be no flights on days of high or gusty, erratic winds or days with poor visibility.

Two-way radio communication between the helicopter and the ground crew will be maintained at all times during the operation.

An operation or contractor's log will be maintained for all phases of the operation. The log will be as detailed as possible and will include names, dates, places and other pertinent information, as well as, observations of personnel involved.

6. Animal Handling and Care

Prior to any gathering operations, the COTR/PI will provide for a pre-capture evaluation of existing conditions in the gather areas. The evaluation will include animal condition, prevailing temperatures, drought conditions, soil conditions, road conditions, and a topographic map with location of fences, other physical barriers, and acceptable trap locations in relation to animal distribution. The evaluation will determine whether the proposed activities will necessitate the presence of a veterinarian during operations. If it is determined that capture efforts necessitate the services of a veterinarian, one would be obtained before capture would proceed.

The contractor will be apprised of the all conditions and will be given instructions regarding the capture and handling of animals to ensure their health and welfare is protected.

The Authorize Officer and pilot may take a familiarization flight identifying all natural hazards (rims, canyons, winds) and man-made hazards in the area so that helicopter flight crew, ground personnel, and wild horse safety will be maximized. Aerial hazards will be recorded on the project map.

No fence modifications will be made without authorization from the Authorized Officer. The contractor/BLM shall be responsible for restoration of any fence modification which has been made.

If the route the contractor/BLM proposes to herd animals passes through a fence, opening should be large enough to allow free and safe passage. Fence material shall be rolled up and fence posts will be removed or sufficiently marked to ensure safety of the animals. The standing fence on each side of the gap will be well flagged or covered with jute or like material.

Wings shall not be constructed out of materials injurious to animals and must be approved by the Authorized Officer.

It is the responsibility of the contractor/BLM to provide security to prevent loss, injury or death of captured animals until delivery to final destination.

Animals shall not be allowed to remain standing on trucks while not in transport for a combined period of greater than three (3) hours. Animals that are to be released back into the capture area may need to be transported back to the original trap site. This determination will be at the discretion of the COTR.

Branded or privately owned animals captured during gather operations will be handled in accordance with state estray laws and existing BLM policy.

Capture methods will be identified prior to issuance of delivery orders. Regardless of which methods are selected, all capture activities shall incorporate the following:

a. Trap Site Selection

The Authorized Officer will make a careful determination of a boundary line to serve as an outer limit within which horses will be herded to a selected trap site. The Authorized Officer will insure that the pilot is fully aware of all natural and manmade barriers which might restrict free movement of horses. Topography, distance, and current condition of the horses are factors that will be considered to set limits to minimize stress on horses.

Gather operations will be monitored and restricted (if necessary) to assure the body condition of the

horses are compatible with the distances and the terrain over which they must travel. Pregnant mares, mares with small colts, and other horses would be allowed to drop out of bands which are being gathered if required to protect the safety and health of the animals.

All trap and holding facility locations must be approved by the Authorized Officer prior to construction. The situation may require moving of the trap. All traps and holding facilities not located on public land must have prior written approval of the landowner.

Trap sites will be located to cause as little injury and stress to the animals, and as little damage to the natural resources of the area, as possible. Sites will be located on or near existing roads. Additional trap sites may be required, as determined by the Authorized Officer, to relieve stress to the animals caused by specific conditions at the time of the gather (i.e. dust, rocky terrain, temperatures, etc.).

b. Trap/Facility Requirements

All traps, wings, and holding facilities shall be constructed, maintained and operated to handle the animals in a safe and humane manner and be in accordance with the following:

Traps and holding facilities shall be constructed of portable panels, the top of which shall not be less than 72 inches high for horses and 60 inches for burros, and the bottom rail of which shall not be more than 12 inches from ground level. All traps and holding facilities shall be oval or round in design.

All loading chute sides shall be fully covered with plywood (without holes) or like material. The loading chute shall also be a minimum of 6 feet high.

All runways shall be of sufficient length and height to ensure animal and wrangler safety and may be covered with plywood, burlap, plastic snow fence or like material a minimum of 1 foot to 5 feet above ground level for burros and 1 foot to 6 feet for horses.

If a government furnished portable chute is used to restrain, age, or to provide additional care for animals, it shall be placed in the runway in a manner as instructed by or in concurrence with the Authorized Officer.

All crowding pens including the gates leading to the runways may, if necessary to prevent injuries from escape attempts, be covered with a material which prevents the animals from seeing out (plywood, burlap, snow fence etc.) and should be covered a minimum of 1 foot to 5 feet above ground level for burros and 2 feet to 6 feet for horses.

When holding facilities are used, and alternate pens are necessary to separate mares with small foals, animals which will be released, sick and injured animals, and estrays from the other animals or to facilitate sorting as to age, number, size, temperament, sex, and condition; they will be constructed to minimize injury due to fighting and trampling. In some cases, the Government will require that animals be restrained for determining an animal's age or for other purposes. In these instances, a portable restraining chute will be provided by the Government. Either segregation or temporary marking and later segregation will be at the discretion of the COTR.

If animals are held in the traps and/or holding facilities, a continuous supply of fresh clean water at a minimum rate of 10 gallons per animal per day will be supplied. Animals held for 10 hours or more in the traps or holding facilities shall be provided good quality hay at the rate of not less than two pounds of hay per 100 pounds of estimated body weight per day.

Separate water troughs shall be provided at each pen where animals are being held. Water troughs shall be constructed of such material (e.g. rubber, rubber over metal) so as to avoid injury to animals.

When dust conditions occur within or adjacent to the trap or holding facility, the contractor/BLM shall be required to wet down the ground with water.

7. Treatment of Injured or Sick; Disposition of Terminal Animals

The contractor/BLM shall restrain sick or injured animals if treatment is necessary. A veterinarian may be called to make a diagnosis and final determination. Destruction shall be done by the most humane method available. Authority for humane destruction of wild horses (or burros) is provided by the Wild Free-Roaming Horse and Burro Act of 1971, Section 3(b)(2)(A), 43 CFR 4730.1, BLM Manual 4730 - Euthanasia is in accordance with BLM policy as expressed in Instructional Memorandum No. 2006-023.

Any captured horses that are found to have the following conditions may be humanely destroyed:

- a. The animal shows a hopeless prognosis for life.
- b. Suffers from a chronic or incurable disease.
- c. Requires continuous care for acute pain and suffering.
- d. Not capable of maintaining a Henneke body condition rating of one or two.
- e. Has an acute or chronic injury, physical defect or lameness that would not allow the animal to live and interact with other horses, keep up with its peers or exhibits behaviors which may be considered essential for an acceptable quality of life constantly or for the foreseeable future.
- f. Suffers from an acute or chronic infectious disease where State or Federal animal health officials order the humane destruction of the animal as a disease control measure.

The Authorized Officer will determine if injured animals must be destroyed and provide for destruction of such animals. The contractor/BLM may be required to dispose of the carcasses as directed by the Authorized Officer.

The carcasses of the animals that die or must be destroyed as a result of any infectious, contagious, or parasitic disease will be disposed of by burial to a depth of at least 3 feet.

The carcasses of the animals that must be destroyed as a result of age, injury, lameness, or non-contagious disease or illness will be disposed of by removing them from the capture site or holding corral and placing them in an inconspicuous location to minimize visual impacts. Carcasses will not be placed in a drainage regardless of drainage size or downstream destination.

8. Motorized Equipment

All motorized equipment employed in the transportation of captured animals shall be in compliance with appropriate State and Federal laws and regulations applicable to the humane transportation of animals. The contractor shall provide the Authorized Officer with a current safety inspection (less than one year old) of all tractor/stock trailers used to transport animals to final destination.

Vehicles shall be in good repair, of adequate rated capacity, and operated so as to ensure that captured animals are transported without undue risk or injury.

Only stock trailers with a covered top shall be allowed for transporting animals from trap site(s) to temporary holding facilities. Only stock trailers, or single deck trucks shall be used to haul animals from

temporary holding facilities to final destination(s). Sides or stock racks of transporting vehicles shall be a minimum height of 6 feet 6 inches from the vehicle floor. Single deck trucks with trailers 40 feet or longer shall have two (2) partition gates providing three (3) compartments within the trailer to separate animals. The compartments shall be of equal size plus or minus 10 percent. Trailers less than 40 feet shall have at least one partition gate providing two (2) compartments within the trailer to separate animals. The compartments shall be of equal size plus or minus 10 percent. Each partition shall be a minimum of 6 feet high and shall have at the minimum a 5 foot wide swinging gate. The use of double deck trailers is unacceptable and will not be allowed.

Vehicles used to transport animals to the final destination(s) shall be equipped with at least one (1) door at the rear end of the vehicle, which is capable of sliding either horizontally or vertically. The rear door must be capable of opening the full width of the trailer. All panels facing the inside of all trailers must be free of sharp edges or holes that could cause injury to the animals. The material facing the inside of the trailer must be strong enough, so that the animals cannot push their hooves through the sides. Final approval of vehicles to transport animals shall be held by the Authorized Officer.

Floors of vehicles, trailers, and the loading chute shall be covered and maintained with materials sufficient to prevent the animals from slipping.

Animals to be loaded and transported in any vehicle or trailer shall be as directed by the Authorized Officer and may include limitations on numbers according to age, size, sex, temperament, and animal condition. The minimum square footage per animal is as follows:

11 square feet/adult horse (1.4 linear foot in an 8 foot wide trailer)
06 square feet/horse foal (0.75 linear foot in an 8 foot trailer)

The Authorized Officer shall consider the condition of the animals, weather conditions, type of vehicles, distance to be transported, or other factors when planning for the movement of captured animals. The Authorized Officer shall provide for any brand and/or inspection services required for the captured animals.

Communication lines will be established with personnel involved in off-loading the animals to receive feedback on how the animals arrive (condition/injury etc.). Should problems arise, gathering methods, shipping methods and/or separation of the animals will be changed in an attempt to alleviate the problems.

If the Authorized Officer determines that dust conditions are such that animals could be endangered during transportation, the contractor/BLM will be instructed to adjust speed and/or use alternate routes.

Periodic checks by the Authorized Officer will be made as animals are transported along dirt roads. If speed restrictions are in effect the Authorized Officer will at times follow and/or time trips to ensure compliance.

9. Special Stipulations.

Private landowners or the proper administering agency(s) would be contacted and authorization obtained prior to setting up traps on any lands which are not administered by BLM. Wherever possible, traps would be constructed in such a manner as to not block vehicular access on existing roads.

If possible, traps would be constructed so that no riparian vegetation is contained within them. Impacts to riparian vegetation and/or running water is located within a trap (and available to horses) would be

mitigated by removing horses from the trap immediately upon capture. No vehicles would be operated on riparian vegetation or on saturated soils associated with riparian/wetland areas.

Whenever possible, gathering would be conducted when soils are dry or frozen and conditions are optimal for safety and protection of the horses and wranglers. Also, whenever possible, scheduling of gathers would be done to minimize impacts with big game hunting seasons.

Gathers would not be conducted 6 weeks on either side of peak foaling season, which for this gather is April 15th, to reduce the chance of injury or stress to pregnant mares or mares with young foals.

The helicopter would avoid eagles and other raptors, and would not be flown repeatedly over any identified active raptor nests. No unnecessary flying would occur over big game on their winter ranges or active fawning/calving grounds during the period of use.

Standard operating procedures in the setting-up and construction of traps will avoid adverse impacts to wildlife species, including threatened, endangered, or sensitive species.

Weed free hay will be used for bait trapping, and feeding purposes of wild horses and/or domestic horses at trap sites. Hay feed at Temporary Holding Facilities placed on federal lands will be certified weed free hay or approved by the authorized officer on site.

10. Herd Health and Viability Data Collection

The following information will be collected from each animal captured: age, sex, color, overall health, pregnancy or nursing status.

In addition, blood or hair samples may be collected from individuals within the herd. Certain other activities including immunocontraceptive research, radio collaring, respiratory disease, and freeze marking may be conducted.

a. Population Management Plan/Selective Addition or Removal

Blood samples may be taken for the purposes of furthering genetic ancestry studies and incorporation into the Population Management Plans which will be developed for each HMA/complex.

On occasion, it may be necessary to enhance and maintain genetic diversity a few animals with compatible characteristics may be introduced from other HMAs. Introduced animals will be taken from areas with similar habitat.

b. Immunocontraceptive Research

When the immunocontraceptive vaccine is used, delivery of the vaccine will be conducted by trained individuals, using approved delivery methods. The vaccine will be administered to the large muscle on the hip and/or as the approved delivery methods directs.

c. Respiratory Disease Research

Serum and nasal samples may be taken from all saddle horses and Judas horses within 48 hours before or after the first day of each gather. Swabs would be used to collect samples of nasal discharge or of the material drainage from the abscess from clinically ill wild horses during routine restraint. Data gathered

from this research would be used in future management of wild horse during gathering and holding.

11. Public Participation

Prior to conducting a gather a communications plan or similar document summarizing the procedures to follow when media or interested public request information or viewing opportunities during the gather should be prepared.

The public must adhere to guidance from the agency representative and viewing must be prearranged.

12. Safety

Safety of BLM employees, contractors, members of the public, and the wild horses will be given primary consideration. The following safety measures will be used by the Authorized Officer and all others involved in the operation as the basis for evaluating safety performance and for safety discussions during the daily briefings:

A briefing between all parties involved in the gather will be conducted each morning.

All BLM personnel, contractors and volunteers will wear protective clothing suitable for work of this nature. BLM will alert observers of the requirement to dress properly (see Wild Horse and Burro Operational Hazards, BLM File 4720, UT-067). BLM will assure that members of the public are in safe observation areas.

The handling of hazardous, or potentially hazardous materials such as liquid nitrogen and vaccination needles will be accomplished in a safe and conscientious manner by BLM personnel or the contract veterinarian.

13. Responsibility and Lines of Communication

The local WH&B Specialist / Project Manager from the CCFO, have the direct responsibility to ensure the contractor's compliance with the contract stipulations.

Gather Research Coordinator (GRC) from the CCFO, will have the direct responsibility to ensure compliance with all data collection and sampling. The GRC will also ensure appropriate communication with Field Office Manager, WO260 National Research Coordinator, College of Veterinary Medicine at Texas A&M University, and Animal Plant Health Inspection Service (APHIS).

The CCFO Assistant Manager will take an active role to ensure the appropriate lines of communication are established between the field, Field Office, State Office, Salt Lake Regional Wild Horse Corrals and Delta Wild Horse Corrals.

All employees involved in the gathering operations will keep the best interests of the animals at the forefront at all times.

14. Glossary

Appropriate Management Level - The number of wild horses and burro which can be sustained within a designated herd management area which achieves and maintains a thriving natural ecological balance keeping with the multiple-use management concept for the area.

Authorized Officer - An employee of the BLM to whom has been delegated the authority to perform the duties described in these Standard Operating Procedures. See BLM Manual 1203 for explanation of delegation of authority.

Census - The primary monitoring technique used to maintain a current inventory of wild horses and burros on given areas of the public lands. Census data are derived through direct visual counts of animals using a helicopter.

Contracting Officer (CO) - Is the individual responsible for an awarded contract, deals with claims, disputes, negotiations, modifications, payments and appoints COTRs and PIs.

Contacting Officers Technical Representative (COTR) - Acts as the technical representative for the CO on a contract. Ensures that all specifications and stipulations are met. Reviews the contractor's progress, advises the CO on progress, problems, costs, etc. Is responsible for review, approval, and acceptance of services.

Evaluation - A determination based on studies and other data that are available as to if habitat and population objectives are or are not being met and where an overpopulation of wild horses and burros exists and whether actions should be taken to remove excess animals.

Excess Wild Horses or Burros - Wild free-roaming horses or burros which have been removed from public lands or which must be removed to preserve and maintain a thriving ecological balance and multiple-use relationship.

Gather Research Coordinator (GRC)- A BLM employee that is designated by the Field Office Manager prior to each gather, who identifies potential problem areas in research data collection, determines need for additional field assistance to meet sampling requirements, ensures compliance with all data sampling, and communicates and coordinates all data gather during a gather with the Field Office Manager, WO260 National Research Coordinator, Colorado State University Center of Veterinary Epidemiology and Animal Disease and Surveillance Systems (CSU-CVEADSS), and Animal Plant Health Inspection Service (APHIS).

Genetically Viable - Fitness of a population as represented by its ability to maintain the long-term reproductive capacity of healthy, genetically diverse members.

Health Assessment - Evaluation process based on best available studies data to determine the current condition of resources in relation to potential or desired conditions.

Healthy Resources - Resources that meet potential or desired conditions or are improving toward meeting those potential or desired conditions.

Herd Area - The geographical area identified as having been used by wild horse and burro populations in 1971, at the time of passage of the Wild Free-roaming Horse and Burro Act.

Herd Management Area - The geographical area as identified through the land use planning process established for the long-term management of wild horse and burro populations. The boundaries of the herd management area may not be greater than the area identified as having been used by wild horse and burro populations in 1971, at the time of passage of the Wild Free-roaming Horse and Burro Act.

Invasive Weeds - Introduced or noxious vegetative species which negatively impact the ecological

balance of a geographical area and limit the areas potential to be utilized by authorized uses.

Metapopulation (complex) - A population of wild horses and burros comprised of two or more smaller, interrelated populations that are linked by movement or distribution within a defined geographical area.

Monitoring - Inventory of habitat and population data for wild horses and burros and associated resources and other authorized rangeland uses. The purpose of such inventories is to be used during evaluations to make determinations as to if habitat and population objectives are or are not being met and where an overpopulation of wild horses and burros exists and whether actions should be taken to remove excess animals.

Multiple Use Management - A combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals watershed, domestic livestock, wild horses, wild burros, wildlife, and fish, along with natural, scenic, scientific, and historical values.

Project Inspector - Coordinates with the COTR assigned to a contract to support his/her responsibility for review, approval, and acceptance of services.

Research - Science based inquiry, investigation or experimentation aimed at increasing knowledge about wild horses and burros conducted by accredited universities or federal government research organizations with the active participation of BLM wild horse and burro professionals.

Science Based Decision Making - Issuance of decisions affecting wild horses and burros, associated resources and other authorized rangeland uses incorporating best available habitat and population data and in consultation with the public.

Studies - Science based investigation of specific aspects of wild horse and burro habitat or populations in supplement to established monitoring. These investigations would not be established following rigid experimental protocols and could include drawing blood on animals to study genetics, disease and general health issues and population dynamics such as reproduction and mortality rates and general behavior.

Thriving Natural Ecological Balance - An ecological balance requires that wild horses and burros and other associated animals be in good health and reproducing at a rate that sustains the population, the key vegetative species are able to maintain their composition, production and reproduction, the soil resources are being protected, maintained or improved, and a sufficient amount of good quality water is available to the animals.

Appendix 6.

Standard BLM Operating Procedures for Fertility Control Treatment

The following management and monitoring requirements are part of the proposed action:

The 22 month pelleted Porcine zona pellucida (PZP) vaccine would be administered by trained BLM personnel.

The fertility control drug would be administered with two separate injections: (1) a liquid dose of PZP is administered using an 18 gauge needle primarily by hand injection; (2) the pellets are preloaded into a 14 gauge needle. These are loaded on the end of a trocar (dry syringe with a metal rod) which is loaded into the jabstick which then pushes the pellets into the breeding mares being returned to the range. The pellets and liquid are designed to release the PZP over time similar to a time release cold capsule.

Delivery of the vaccine would be as an intramuscular injection while the mares are restrained in a working chute. 0.5 cubic centimeters (cc) of the PZP vaccine would be emulsified with 0.5 cc of adjuvant (a compound that stimulates antibody production) and loaded into the delivery system. The pellets would be loaded into the jabstick for the second injection. With each injection, the liquid and pellets would be propelled into the left hind quarters of the mare, just below the imaginary line that connects the point of the hip and the point of the buttocks.

All treated mares would be freeze-marked with two 3.5-inch letters on the left hip for treatment tracking purposes. The only exception to this requirement is that each treated mare can be clearly and specifically identified through photographs or markings. This step is to enable researchers to positively identify the animals during the research project as part of the data collection phase.

At a minimum, estimation of population growth rates using helicopter or fixed wing surveys would be conducted the year preceding any subsequent gather. During these surveys it would not be necessary to identify which foals were born to which mares, only an estimate of population growth is needed (i.e. # of foals to # of mares).

Population growth rates of herds selected for intensive monitoring would be estimated every year post-treatment using helicopter or fixed wing surveys. During these surveys it would not be necessary to identify which foals were born to which mares, only an estimate of population growth is needed (i.e. # of foals to # of mares). During routine HMA field monitoring (on-the-ground), if data on mare to foal ratios can be collected, these data should also be shared with the NPO for possible analysis by the USGS.

A PZP Application Data sheet would be used by the field applicators to record all the pertinent data relating to identification of the mare (including a photograph if the mares are not freeze-marked) and date of treatment. Each applicator would submit a PZP Application Report and accompanying narrative and data sheets would be forwarded to the NPO (Reno, Nevada). A copy of the form and data sheets and any photos taken would be maintained at the field office.

A tracking system will be maintained by NPO detailing the quantity of PZP issued, the quantity used, disposition of any unused PZP, the number of treated mares by HMA, field office, and state along with the freeze-mark applied by HMA.

Appendix 7

Standard Operating Procedures for Field Castration (Gelding) of Wild Horse Stallions

June 2011

Gelding will be performed with general anesthesia and by a veterinarian. The combination of pharmaceutical compounds used for anesthesia, method of physical restraint, and the specific surgical technique used will be at the discretion of the attending veterinarian with the approval of the authorized officer (I.M. 2009-063).

Pre-surgery Animal Selection, Handling and Care

1. Stallions selected for gelding will be greater than 6 months of age and less than 20 years of age.
2. All stallions selected for gelding will have a Henneke body condition score of 3 or greater. No animals which appear distressed, injured or in failing health or condition will be selected for gelding.
3. Stallions will not be gelded within 36 hours of capture and no animals that were roped during capture will be gelded at the temporary holding corrals for rerelease.
4. Whenever possible, a separate holding corral system will be constructed on site to accommodate the stallions that will be gelded. These gelding pens will include a minimum of 3 pens to serve as a working pen, recovery pen(s), and holding pen(s). An alley and squeeze chute built to the same specifications as the alley and squeeze chutes used in temporary holding corrals (solid sides in alley, minimum 30 feet in length, squeeze chute with non-slip floor) will be connected to the gelding pens.
5. When possible, stallions selected for gelding will be separated from the general population in the temporary holding corral into the gelding pens, prior to castration.
6. When it is not possible or practical to build a separate set of pens for gelding, the gelding operation will only proceed when adequate space is available to allow segregation of gelded animals from the general population of stallions following surgery. At no time will recently anesthetized animals be returned to the general population in a holding corral before they are fully recovered from anesthesia.
7. All animals in holding pens will have free access to water at all times. Water troughs will be removed from working and recovery pens prior to use.
8. Prior to surgery, animals in holding pens may be held off feed for a period of time (typically 12-24 hours) at the recommendation and direction of the attending veterinarian.
9. The final determination of which specific animals will be gelded will be based on the professional opinion of the attending veterinarian in consultation with the Authorized Officer.
10. Whether the procedure will proceed on a given day will be based on the discretion of the attending veterinarian in consultation with the Authorized Officer taking into consideration the prevailing weather, temperature, ground conditions and pen set up. If these field situations can't be remedied, the procedure will be delayed until they can be, the stallions will be transferred to a prep facility, gelded, and later returned, or they will be released to back to the range as intact stallions.

Gelding Procedure

1. All gelding operations will be performed under a general anesthetic administered by a qualified and experienced veterinarian. Stallions will be restrained in a portable squeeze chute to allow the veterinarian to administer the anesthesia.
2. The anesthetics used will be based on a xylazine/ketamine combination protocol. Drug dosages and combinations of additional drugs will be at the discretion of the attending veterinarian.
3. Animals may be held in the squeeze chute until the anesthetic takes effect or may be released into the working pen to allow the anesthesia to take effect. If recumbency and adequate anesthesia is not achieved following the initial dose of anesthetics, the animal will either be redosed or the surgery will not be performed on that animal at the discretion of the attending veterinarian.
4. Once recumbent, rope restraints or hobbles will be applied for the safety of the animal, the handlers and the veterinarian.
5. The specific surgical technique used will be at the discretion of the attending veterinarian.
6. Flunixin meglumine or an alternative analgesic medication will be administered prior to recovery from anesthesia at the professional discretion of the attending veterinarian.
7. Tetanus prophylaxis will be administered at the time of surgery.

8. Other medications may also be administered at the time of surgery at the professional discretion of the attending veterinarian.
9. All geldings will be allowed to recover from anesthesia within the working pen or the adjacent recovery pen. Once, fully recovered each gelding will be transferred to the gelding holding pen(s). Animals will remain segregated from intact stallions for at least 24 hours following surgery or until their release.
10. Any stallions determined or believed to be a cryptorchid will be allowed to recover from the anesthesia, marked for later recognition, and shipped to a BLM prep facility for appropriate surgery or euthanasia if it is determined that they cannot be fully castrated. At no time will a partial castration be performed. Because cryptorchidism is an inherited condition, cryptorchid stallions should never be released back into an HMA.
11. Gelded animals will be freeze marked on their left hip with an identifying mark to minimize the potential for future recapture and to facilitate post-treatment monitoring. Each State will establish its own marking system in compliance with their State Brand Board. For example, Nevada BLM will utilize the identifying freeze mark on the hip (to be determined) as well as a 2 inch "F" freeze mark on the left side of the neck per agreement with the NV Brand Board.

Post-operative handling, care and monitoring

1. All animals that have fully recovered from anesthesia will have free access to water and hay prior to subsequent release.
2. All geldings will be held at least overnight for observation. Animals will not be left unattended for at least 3 hours following the procedure.
3. The attending veterinarian will observe all animals 12-24 hours after the procedure or again prior to release. Geldings will be released no later than 48 hours following surgery near a water source in their home range when possible.
4. Any gelding observed have complications will be held at the gather site until his condition improves or be shipped to a holding facility until he is able to be returned to the range.
5. Gelded animals would be monitored periodically for complications for approximately 7-10 days post-surgery. This monitoring will be completed either through aerial recon if available or field observations from major roads and trails. It is not anticipated that all the geldings will be observed but the goal is to detect complications if they are occurring and determine if the horses are freely moving about the HMA.
6. Animals found on the range with serious gelding complications will either be recaptured for treatment, if possible or euthanized as an act of mercy if necessary.
7. Observations of the long term outcomes of gelding will be recorded during routine resource monitoring work. Such observations will include but may not limited to band size, social interactions with other geldings and harem bands, distribution within their habitat, forage utilization and activities around key water sources.

Appendix 8
Population Model
Frisco 2012 Population Modeling

To complete the population modeling for the Frisco Herd Management Area, version 1.40 of the WinEquus program, created April 2, 2002, was utilized.

Objectives of Population Modeling

Review of the data output for each of the simulations provided many use full comparisons of the possible outcomes for each alternative. Some of the questions that need to be answered through the modeling include:

- Do any of the Alternatives “crash” the population?
- What effect does fertility control have on population growth rate?
- What effects do the different alternatives have on the average population size?
- What effects do the different alternatives have on the genetic health of the herd?

Population Data, Criteria, and Parameters utilized for Population Modeling

All simulations used the survival probabilities, foaling rates, and sex ratio at birth that was supplied with the Winn Equus population for the Garfield HMA.

Sex ratio at Birth:

50% Females

50% Males

The following percent effectiveness of fertility control was utilized in the population modeling for Alternative I:

Year 1: 94%, Year 2: 82%, Year 3: 68%

The following table displays the contraception parameters utilized in the population model for Alternative 2-4:

Contraception Criteria

Age	Percentages for Fertility Treatment
1	0%
2	100%
3	100%
4	100%
5	100%
6	100%
7	100%
8	100%
9	100%
10-14	100%
15-19	100%
20+	0%

Population Modeling Criteria

The following summarizes the population modeling criteria that are common to the Proposed Action and all alternatives:

- Starting year: 2012
- Initial Gather Year: 2012
- Gather interval: regular interval of three years
- Gather for fertility treatment regardless of population size: No
- Continue to gather after reduction to treat females: Yes
- Sex ratio at birth: 57% males
- Percent of the population that can be gathered: 80%
- Minimum age for long term holding facility horses: Not Applicable
- Foals are included in the AML
- Simulations were run for 10 years with 100 trials each

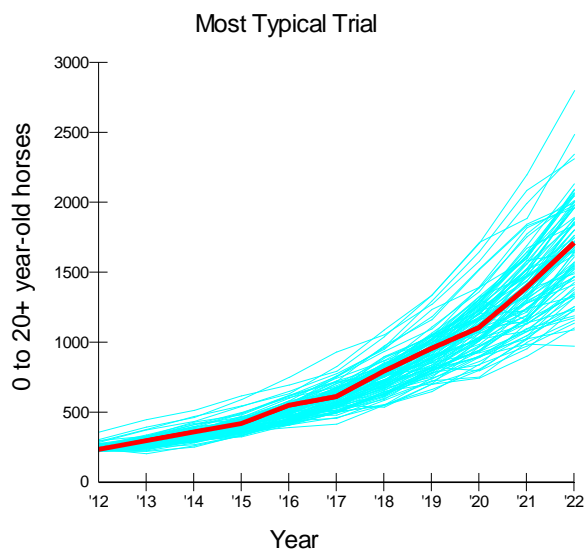
The following table displays the population modeling parameters utilized in the model:

Population Modeling Parameters Modeling Parameter	Alternative 1: No Action – Continue Existing Management. No Gather and Removal	Alternative 2: Proposed Action – Implement HMAP. Gather and Removal (Remove to Low point of AML, Adjust sex ratio 60/40 male to female ratio & Fertility Control on mare returned to HMA).	Alternative 3: Implement HMAP. Adjustment of AML and gather/removal of excess wild horses, apply fertility control including release of geldings as part of the male population.	Alternative 4: No Action on HMAP. Gather and Removal with Fertility control.	Alternative 5: No Action on HMAP. Gather and Removal without fertility control.
Management by removal, 60:40 adjustment in sex ratio, and fertility control	No	Yes	Yes	No	No
Management by removal only	No	No	No	No	Yes
Threshold Population Size Following Gathers	N/A	60	100	60	60
Target Population Size Following gather	N/A	40	50	40	40
Gather for fertility control regardless of population size	N/A	No	No	No	No
Gather continue after removals to treat additional females	N/A	Yes	Yes	Yes	No
Effectiveness of Fertility Control: Year 1	N/A	94%	94%	94%	N/A
Effectiveness of Fertility Control: Year 2	N/A	82%	82%	82%	N/A
Effectiveness of Fertility Control: Year 3	N/A	68%	68%	68%	N/A

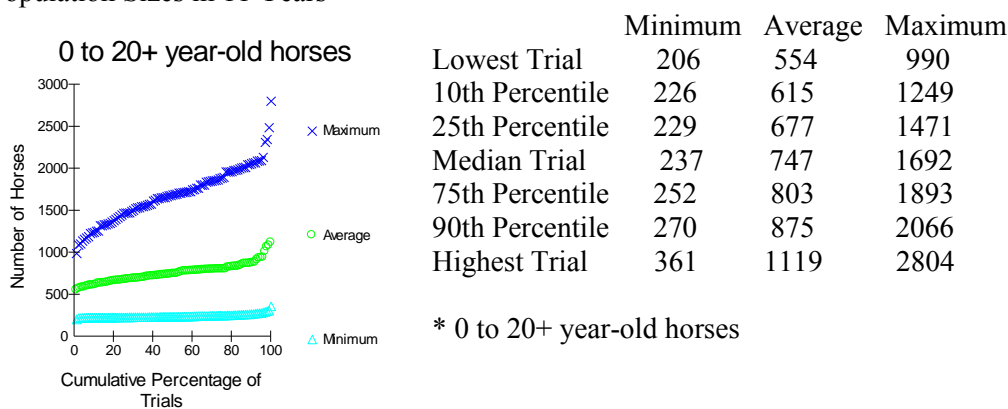
Results Alternative 1: No Action – Continue Existing Management. No Gather and Removal

Results - No Action

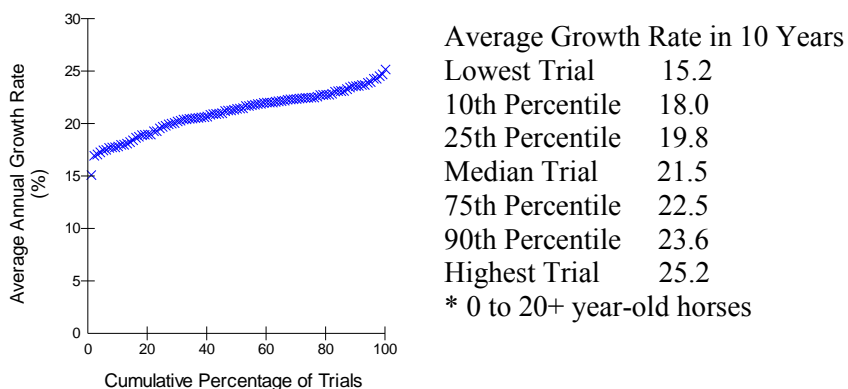
Population Size



Population Sizes in 11 Years*

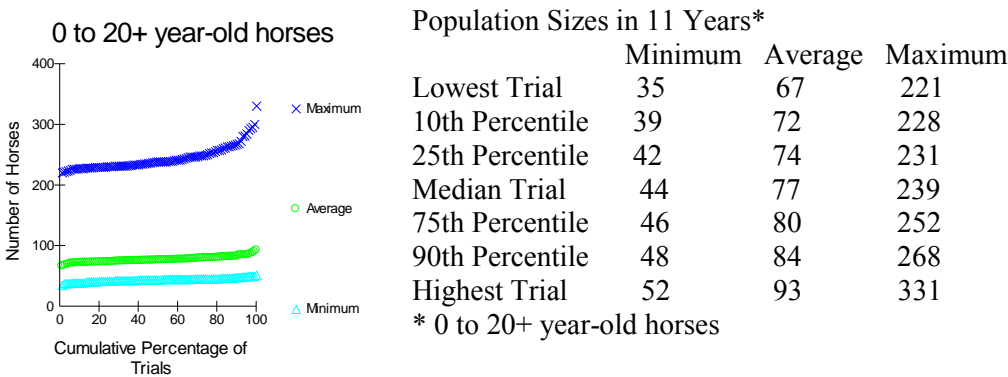
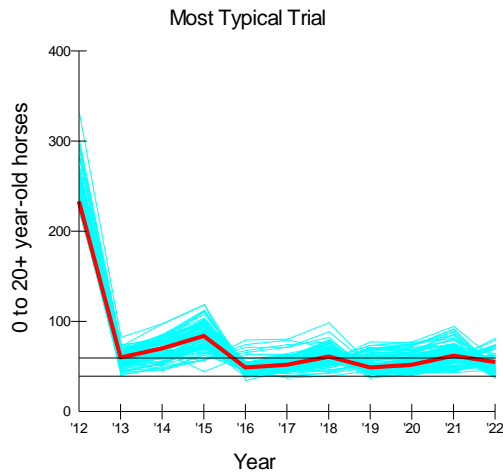


In 11 years and 100 trials, the lowest number 0 to 20+ year-old horses ever obtained was 206 and the highest was 2804. In half the trials, the minimum population size in 11 years was less than 237 and the maximum was less than 1692. The average population size across 11 years ranged from 554 to 1119.

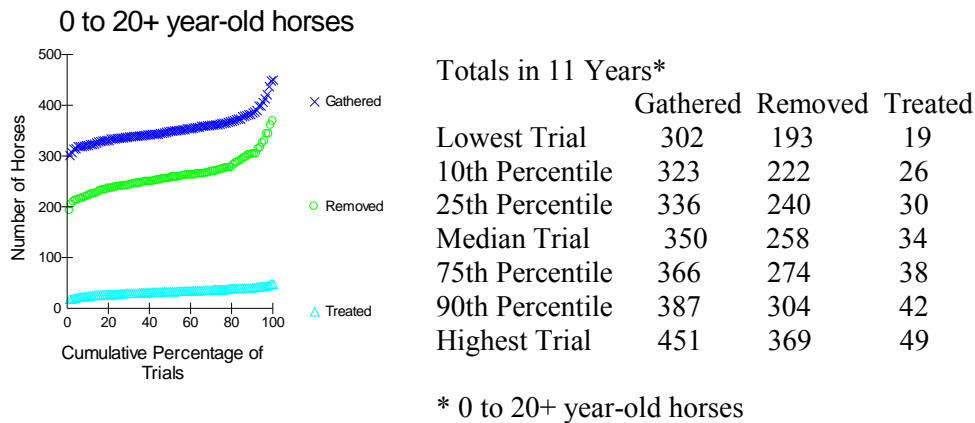


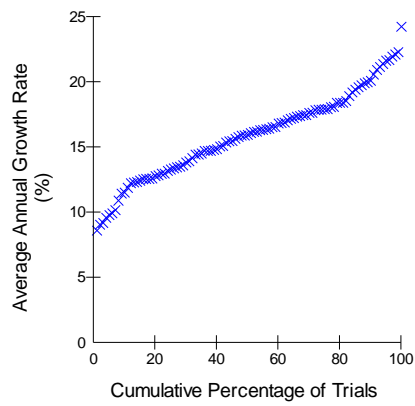
Results Alternative 2: Proposed Action – Implement HMAP. Gather and Removal (Remove to Low point of AML, Adjust sex ratio 60/40 male to female ratio & Fertility Control on mare returned to HMA).

Population Size



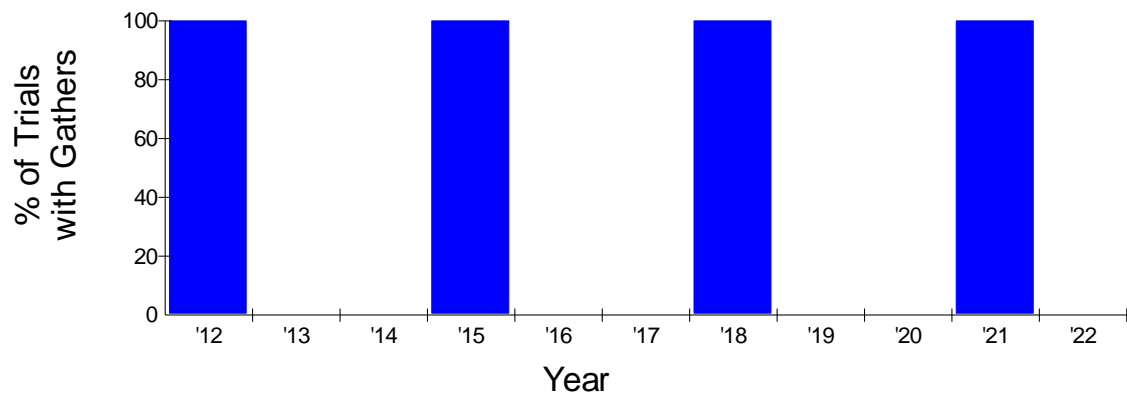
In 11 years and 100 trials, the lowest number 0 to 20+ year-old horses ever obtained was 35 and the highest was 331. In half the trials, the minimum population size in 11 years was less than 44 and the maximum was less than 239. The average population size across 11 years ranged from 67 to 93.





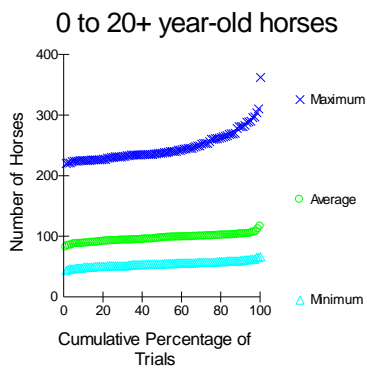
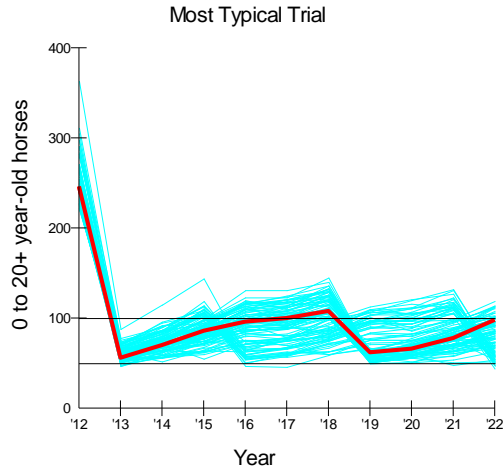
Average Growth Rate in 10 Years

Lowest Trial	8.6
10th Percentile	11.7
25th Percentile	13.4
Median Trial	16.0
75th Percentile	17.9
90th Percentile	20.4
Highest Trial	24.3



Results Alternative 3: Implement HMAP. Adjustment of AML to 50 to 100 and gather/removal of excess wild horses, apply fertility control including release of geldings as part of the male population.

Population Size

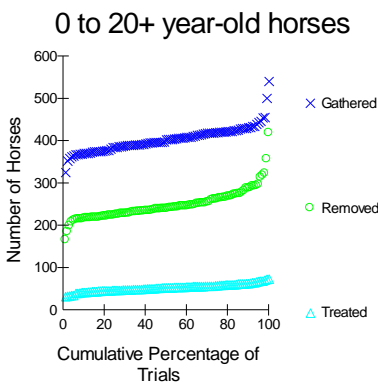


Population Sizes in 11 Years*

	Minimum	Average	Maximum
Lowest Trial	44	82	221
10th Percentile	50	89	226
25th Percentile	52	93	232
Median Trial	56	98	238
75th Percentile	58	101	261
90th Percentile	61	104	282
Highest Trial	67	117	363

* 0 to 20+ year-old horses

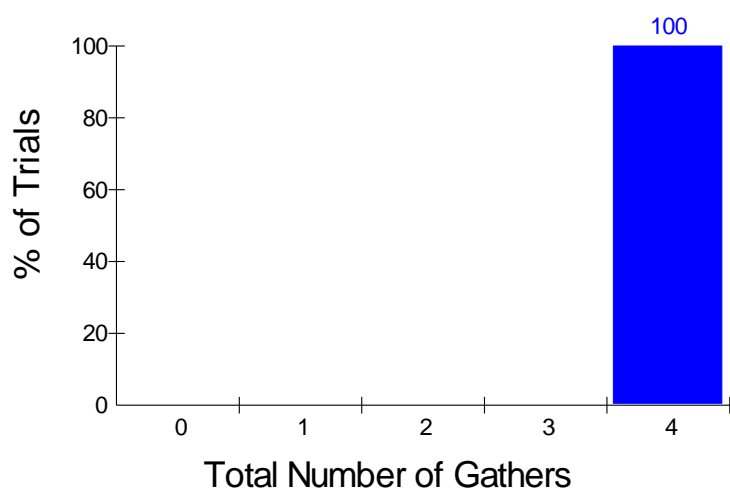
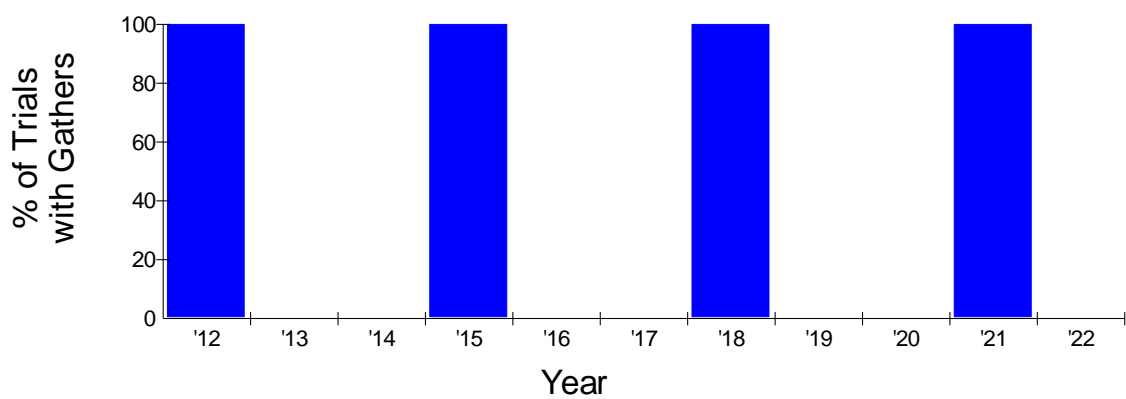
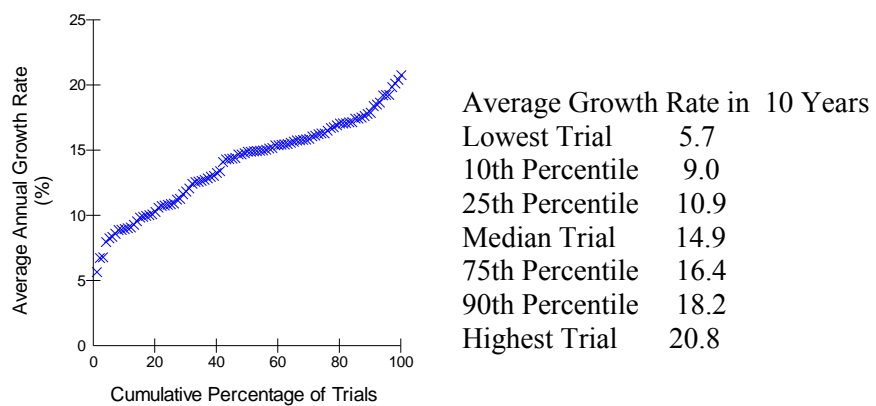
In 11 years and 100 trials, the lowest number 0 to 20+ year-old horses ever obtained was 44 and the highest was 363. In half the trials, the minimum population size in 11 years was less than 56 and the maximum was less than 238. The average population size across 11 years ranged from 82 to 117.



Totals in 11 Years*

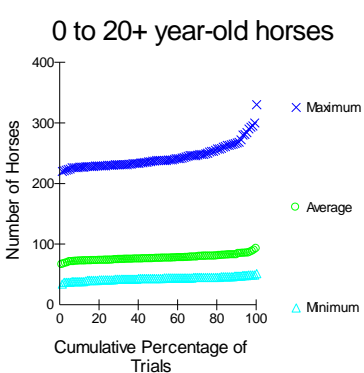
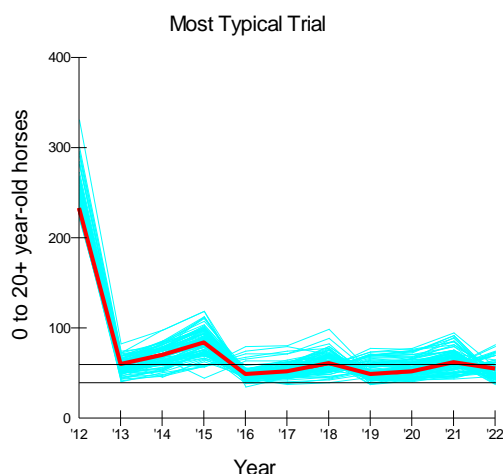
	Gathered	Removed	Treated
Lowest Trial	326	166	32
10th Percentile	371	218	42
25th Percentile	385	226	47
Median Trial	404	240	53
75th Percentile	420	264	58
90th Percentile	432	288	63
Highest Trial	541	419	74

* 0 to 20+ year-old horses



Results Alternative 4: No Action on HMAP. Gather and Removal with Fertility control.

Population Size

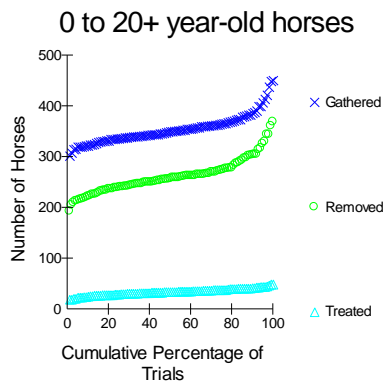


Population Sizes in 11 Years*

	Minimum	Average	Maximum
Lowest Trial	35	67	221
10th Percentile	39	72	228
25th Percentile	42	74	231
Median Trial	44	77	239
75th Percentile	46	80	252
90th Percentile	48	84	268
Highest Trial	52	93	331

* 0 to 20+ year-old horses

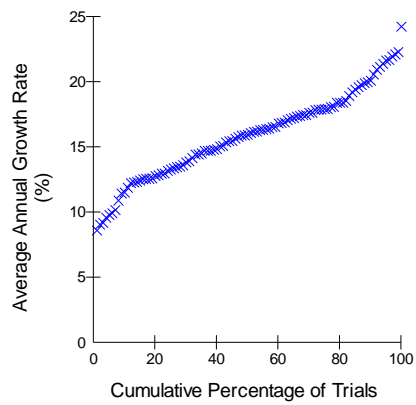
In 11 years and 100 trials, the lowest number 0 to 20+ year-old horses ever obtained was 35 and the highest was 331. In half the trials, the minimum population size in 11 years was less than 44 and the maximum was less than 239. The average population size across 11 years ranged from 67 to 93.



Totals in 11 Years*

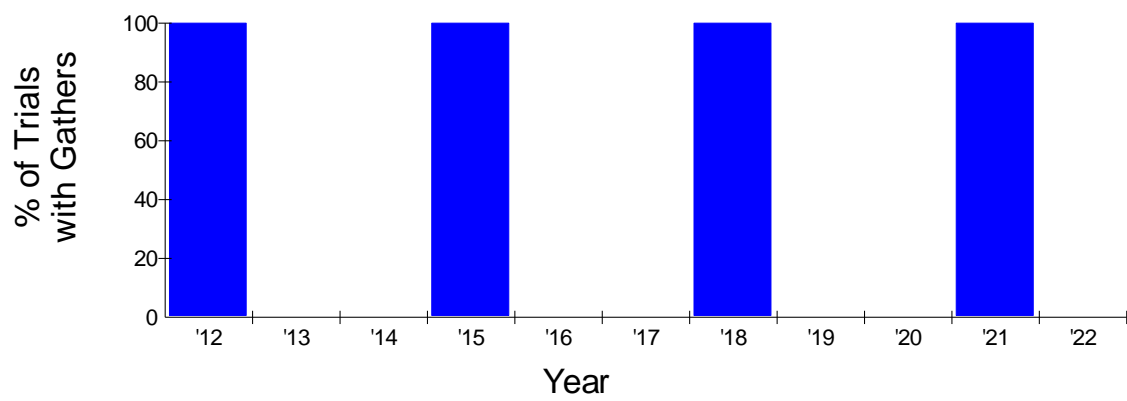
	Gathered	Removed	Treated
Lowest Trial	302	193	19
10th Percentile	323	222	26
25th Percentile	336	240	30
Median Trial	350	258	34
75th Percentile	366	274	38
90th Percentile	387	304	42
Highest Trial	451	369	49

* 0 to 20+ year-old horses



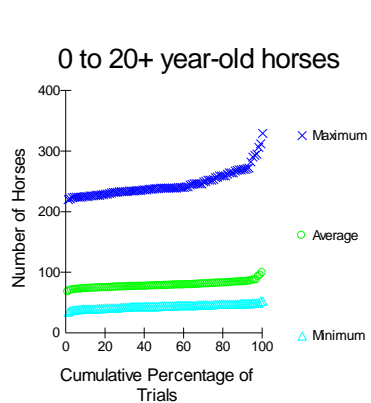
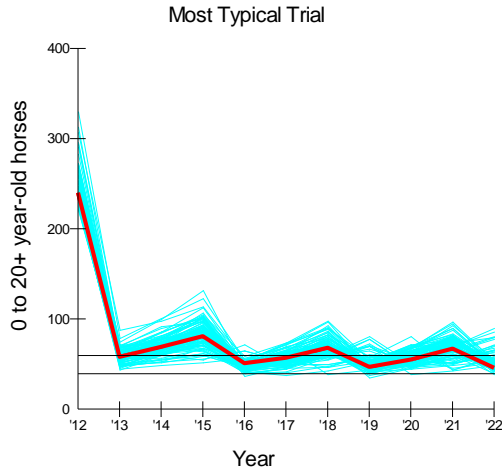
Average Growth Rate in 10 Years

Lowest Trial	8.6
10th Percentile	11.7
25th Percentile	13.4
Median Trial	16.0
75th Percentile	17.9
90th Percentile	20.4
Highest Trial	24.3



Results Alternative 5: No Action on HMAP. Gather and Removal without fertility control.

Population Size



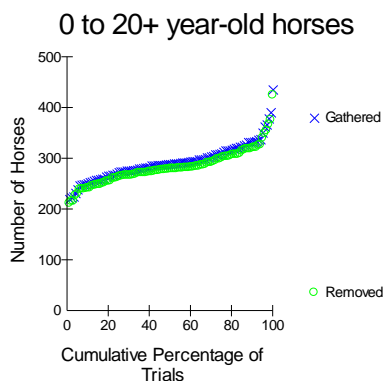
Population Sizes in 11 Years*

	Minimum	Average	Maximum
Lowest Trial	35	68	221
10th Percentile	40	73	226
25th Percentile	42	76	233
Median Trial	45	78	240
75th Percentile	48	82	256
90th Percentile	49	84	271
Highest Trial	53	99	330

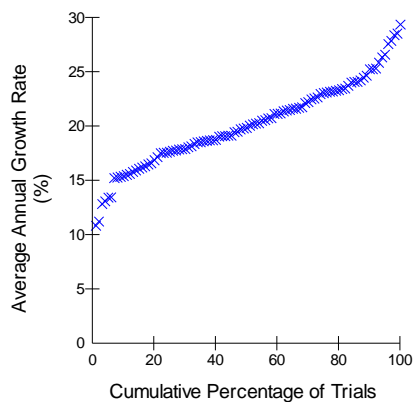
* 0 to 20+ year-old horses

In 11 years and 100 trials, the lowest number 0 to 20+ year-old horses ever obtained was 38 and the highest was 346. In half the trials, the minimum population size in 11 years was less than 44 and the maximum was less than 270. The average population size across 11 years ranged from 74 to 91.

Totals in 11 Years*

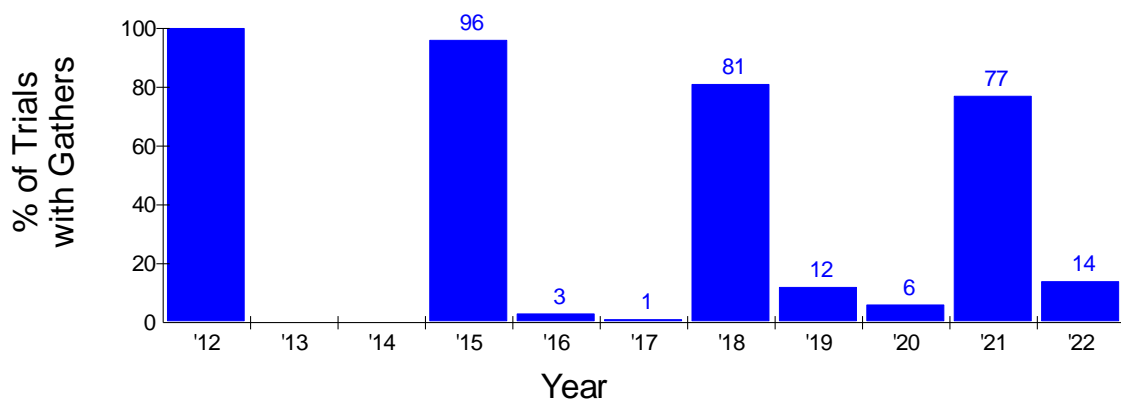


	Gathered	Removed
Lowest Trial	220	212
10th Percentile	252	242
25th Percentile	274	264
Median Trial	289	280
75th Percentile	312	302
90th Percentile	332	322
Highest Trial	436	425* 0 to 20+ year-old horses



Average Growth Rate in 10 Years

Lowest Trial	10.9
10th Percentile	15.5
25th Percentile	17.7
Median Trial	20.0
75th Percentile	23.1
90th Percentile	25.3
Highest Trial	29.4





Appendix 9
United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Color Country Field Office
Cedar City Field Office

176 East DL Sargent Drive

Cedar City, UT 84721

Telephone (435) 586-2401

www.blm.gov/ut/st/en/fo/cedar_city.html



In Reply Refer To:

UTC012

4710

May 10, 2012

MEMORANDUM

To: Wild Horse Files (UT-445)

From: Chad Hunter (CCFO Wild Horse/Range Mgt. Specialist)

Subject: Wild Horse helicopter inventory of the Frisco HMA

This memorandum outlines the findings of a helicopter population inventory of wild horses on the Frisco HMA. The flight was done on **April 16-17, 2012**. A MD 500 helicopter from Sky-Hawk helicopters in St. George, Utah was used. Josh Fitts was the pilot while I acted as the BLM helicopter crew member, flight manager and photographer. Dave Jacobson and Dan Fletcher also acted as helicopter crew members recording numbers, locations, body conditions, yearling numbers and colors of the horses observed during the flight. Mary Hayes of the Cedar City air center completed the safety plan. Ben Seric acted as Helicopter Managers and card checks, arranged flight following and other helicopter checks and paperwork. Color Country Dispatch coordinated the use of air space in the Sevier MOA that occurs to the north of the Frisco HMA. Agnav was used to record the flight path of the helicopter and a Trimble GeoXM was used to record the location of horses without complications. The flight path is shown on Map 2.

Both days the flights originated at Cedar City Airport, Utah at approximately 0800. The Helicopter Manager reviewed the cards for the helicopter and pilot. A safety briefing was given and flight plans for the day were reviewed.

A mobile Skyhawk fuel truck provided fuel for the population inventory and was sent from the base at Cedar City to fueling location at the Frisco Summit. Ferry time from Cedar City to the HMA was approximately ½ hours. Approximately 14 hours were spent on the Frisco HMA population inventory. Total flight time for each day was approximately 6.5 hours at \$890 an hour. Cost for the population inventory flight was approximately \$14,000 (\$856 per hour + fuel truck + extended hours).

The objective was to do a wild horse population inventory on the Frisco HMA. The Mark-Resight method was used to inventory the horses. The HMA was flown in transects 6 times in slightly different directions. Photos of each band of horses that was seen during each transects were taken. The week following the flight the photos were compared to each other and each

individual band was identified. A direct count of horses was taken from the photos of each horse identified in the bands. The data was then sent to a statistician to figure a range of the population with a confidence interval. That data will be incorporated in to this document when received.

Most horses were in Henneke Body Class 5 (Moderate) to 4 (Moderately thin), but look like they were putting on weight from the green up of the cheatgrass and some of the perennial grasses. Twelve (12) young colts (under 6 months) were observed during the flight.

Several head of elk and pronghorn antelope were counted on and just outside the north part of the HMA. Approximately 45 head of elk were counted. Approximately 90 pronghorn were counted in several herds.

On the Frisco HMA a total of **212** head of wild horses were counted. A good portion of the horses were located on the Frisco Fire ESR project that was completed in 2007. This HMA does not see much interchange from horses from other HMAs, but horses from other wild horse HMAs have been introduced to the HMA in the past. However no new horses have been introduced to the HMA since the last population inventory. It is unknown if any domestic horses have been turned out on the HMA.

The total for the *Frisco HMA* is 212 (including 31 horses that were yearlings and 14 foals born in 2012) were counted in 47 bands.

Frisco HMA population increase this last year was **16%**. $31(f) \div 198(a) \times 100 = 16\%$

Estimated Population 212 head

Key points to note with FY 2012 Population inventory.

- New Mark-Resight method used
- Photo comparison of horses from 6 transects gave a direct count for the estimated population.
- The last two population inventories have increased the population estimate as the method for the inventories have improved.
- Reproduction rate is less than 20% which is normally used to estimate population growth on this HMA
- Horses were in good condition despite little spring green up or growth on perennial plants.
- It is believed some domestic horses have been released into the HMAs.
- Elk use of this HMA has increased in the last 15 years.

/Chad Hunter

Attachments

1. Aerial Population inventory Spread Sheet (includes Frisco population inventory).
2. Map 1 of Aerial Population Inventory
3. Map 2 Flight Path of Population Inventory

Appendix 10

Scheduled Observation Day Protocol and Ground Rules

These rules were created to ensure the safety of both the humans and the animals at the gather site(s).

A scheduled public observation day provides a more structured mechanism for interested members of the public to see the wild horse gather activities at a given site. The BLM attempts to allow the public to get an overall sense of the gather process and has available staff who can answer questions that the public may have. The public rendezvous at a designated place and are escorted by BLM representatives to and from the gather site.

- The Bureau of Land Management (BLM) will schedule observation days to provide the media and public opportunities to view activities during the wild horse gather.
- To provide a safe environment for the animals, BLM staff, contractors and members of the public/media, requests will be accepted on a first come, first served basis and be limited to **10 people** per observation day. The BLM recommends all appointments be made as far in advance as possible in order to help us schedule and confirm your request, and will make every reasonable effort to accommodate the public.
- Observation days and gather operations may be suspended if bad weather conditions create unsafe flying conditions.
- The BLM will notify observers as soon as possible if an observation day is canceled due to bad weather.
- Observers must provide their own 4-wheel drive high clearance vehicle, appropriate shoes, clothing and food.
- Observers are prohibited from riding in government and contractor vehicles and equipment.
- Visitors arriving at the rendezvous site without an appointment will not be allowed to participate in the observation day.
- BLM representatives will escort visitors to and from the gather and/or temporary holding facility.
- Visitors will be assigned to a BLM representative and must stay with that person at all times.
- Visitors are **NOT** permitted to walk around the gather site unaccompanied by a BLM representative.
- The BLM will clearly identify observation areas and visitors **must** stay within these designated areas.
- Observers are prohibited from climbing/trespassing onto or in the trucks, equipment or corrals, which is the private property of the contractor.
- Visitors must direct their questions/comments to either a designated BLM representative or the BLM spokesperson on site, and not engage other BLM/contractor staff and disrupt their gather duties/responsibilities.
- BLM may make the BLM/contractor staff available during down times for a Q&A session.
- When given the signal that the helicopter is close to the gather site bringing horses in, visitors must sit down in areas specified by BLM representatives and must not move or talk as the horses are guided into the corral.

Observers will be polite, professional and respectful to BLM managers and staff and the contractor/employees.

Visitors who do not cooperate and follow the rules will be escorted off the gather site by BLM law enforcement personnel, and will be prohibited in participating in any subsequent observation days.

Non- Scheduled Observation day Protocol and Ground Rules

Non-scheduled observation days are days when the public is welcome to attend a gather on public land, or

on specified private lands where permission was granted. The public is responsible for their own safety and health in their travels to and from the gather site.

- BLM staff may be limited on these days to answer questions.
- Visitors must direct their questions/comments to either a designated BLM representative or the BLM spokesperson on site, and not engage other BLM/contractor staff and disrupt their gather duties/responsibilities.
- The public will be expected to remain in designated observation areas.
- Visitors are **NOT** permitted to walk around the gather site unaccompanied by a BLM representative.
- The BLM will clearly identify observation areas and visitors **must** stay within these designated areas.
- Observers are prohibited from climbing/trespassing onto or in the trucks, equipment or corrals, which is the private property of the contractor.
- Observers must provide their own 4-wheel drive high clearance vehicle, appropriate shoes, clothing and food.
- When given the signal that the helicopter is close to the gather site bringing horses in, visitors must sit down in areas specified by BLM representatives and must not move or talk as the horses are guided into the corral.
- Gather operations may be suspended if bad weather conditions create unsafe flying conditions. Notification of suspension of gather operations will be made to the public that is present as soon as possible.
- Visitors must direct their questions/comments to either a designated BLM representative or the BLM spokesperson on site, and not engage other BLM/contractor staff and disrupt their gather duties/responsibilities.
- BLM may make the BLM/contractor staff available during down times for a Q&A session.

Observers will be polite, professional and respectful to BLM managers and staff and the contractor/employees.

Visitors who do not cooperate and follow the rules will be escorted off the gather site by BLM law enforcement personnel, and will be prohibited in participating in any subsequent observation days.

Appendix 11
***Summary of Comments Received During Public Scoping and How BLM Used These Comments in
Preparing this Preliminary Environmental Assessment***

